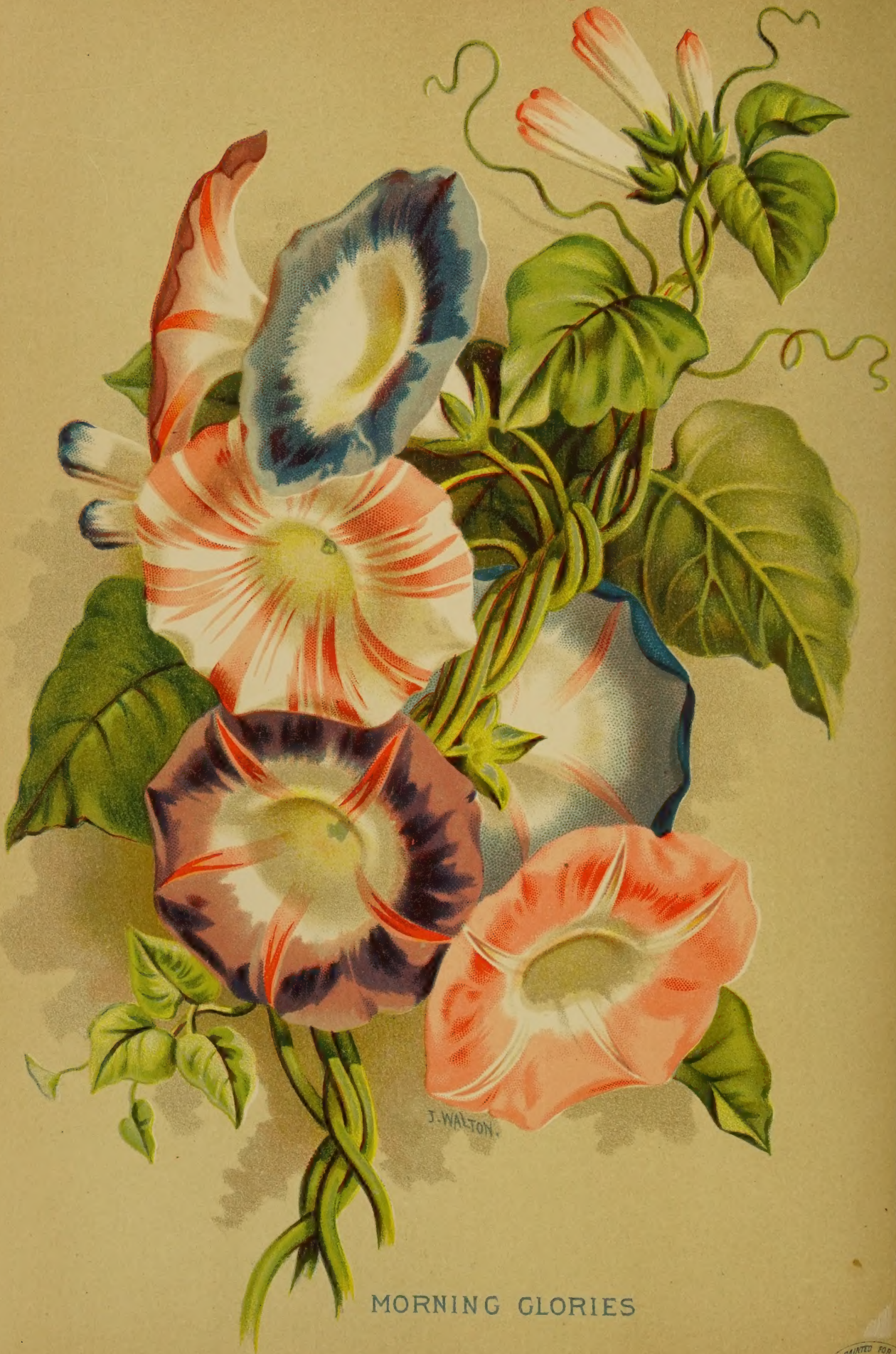
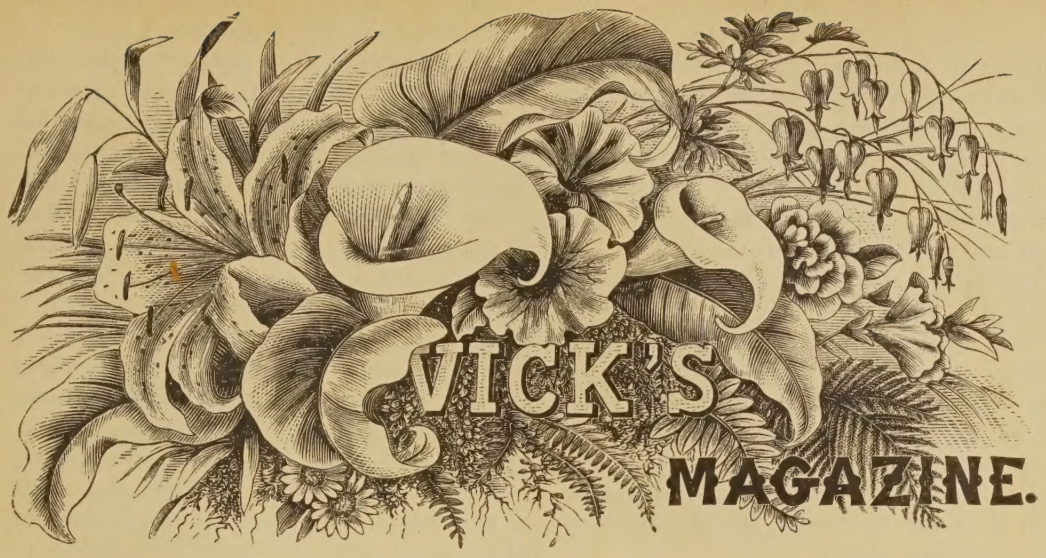


MORNING GLORIES



NOVEMBER, 1887.

WHATEVER doubt in regard to the wholly injurious habits of the English Sparrow, Passer domestica, may have remained in the minds of farmers and gardeners, it must now be dispelled, when the mass of facts are fully known which have been collected by the Department of Agriculture, and published in the Report of 1886, recently distributed.

The information on this subject in the possession of the Department was obtained in answer to circulars which it had distributed in all parts of the country. Thirty-two hundred replies have been received.

In regard to the introduction of the English Sparrow, the Report says :

"The English Sparrow was first brought to this country, so far as authentic information has reached the Department, in the fall of 1850, when the Hon. NICOLAS PIKE, and other directors of the Brooklyn Institute imported eight pairs into Brooklyn, N. Y. They were artificially housed over winter and liberated early in the following year ; but they did not thrive. In 1852 a larger colony was imported. These birds are said to have multiplied and spread over Long Island and adjacent parts of New York and New Jersey. In 1858, and at subsequent dates, independent importations were made, and colonies were planted in Portland, Me.; Peacedale, R. I.; New York, Philadelphia, and other Eastern cities. In most cases the birds did well. They multiplied and spread gradually to neighboring towns. But the process of diffusion was slow at first, and it was not until 1870 that the species can be said to have firmly established itself throughout the Eastern States, and to have begun in earnest its westward march. From this time to the present, the marvelous rapidity of its multiplication, the surpassing swiftness of its extension, and the prodigious size of the area it has overspread are without parallel in the history of any bird. Like a noxious weed transplanted to a fertile soil, it has taken root and disseminated itself over half a continent before the significance of its presence has come to be understood. The explanation of this phenomenal invasion must be found in part in the peculiar impetus usually given prolific species when carried to a new country where the conditions for existence are in every way favorable; and in part in its exceptional adaptability to a diversity of physical and climatic conditions. This adaptability has enabled it not only to endure alike the tropical heat of Australia and the frigid winter of Canada, but to thrive and become a burdensome pest in both these widely separated lands.

"The English Sparrow is a hardy, prolific and aggressive bird, possessed of

much intelligence and more than ordinary cunning. It is domestic and gregarious in habit, and takes advantage of the protection afforded by proximity to man, thus escaping nearly all of the enemies which check the abundance of our native birds. Moreover, for many years it was looked upon with favor, and both food and shelter were provided it."

The birds raise from four to six young ones at a time, and from the latitude of of New York southward, hatch five or six times a year. Up to last year the Sparrow had established itself in thirty-five States and five Territories, and over a great portion of Canada. It is in Florida, Texas, Arizona, Utah and California, as well as in all Northern, Middle, Western and Southern States.

The Sparrow is a very fierce bird and a great fighter with such other kinds as it dares to attack, and of the native kinds, which make their nests near our homes, only the Martin are reported to be able to resist them, and the Martin is sometimes forced to yield and give up its nest.

"The birds which have suffered most from the English Sparrow, and whose cheery presence in the parks and lawns in the nesting season we no longer, or only rarely, enjoy, are the Robin, Catbird, Bluebird, Wren, Song Sparrow, Chipping Sparrow, Yellow-bird, Oriole, Vireo and Phœbe. Not only does the Sparrow drive away and sometimes kill the adult birds, but when it finds their nests it throws out the eggs and young, and not infrequently feasts upon them. Dr. B. HARRY WARREN, State Ornithologist, of Pennsylvania, writes:

"'Our native birds have rapidly and steadily diminished in numbers since the Sparrows came. Former plentiful residents are rare. Even transient visitants and migrants have been so pursued by the usurper that they now seem to avoid West Chester as a plague-stricken spot. In 1877 I saw two cock Sparrows attack a nest of the Warbling Vireo in the absence of the parent birds, pull out, one at a time, the four half-fledged occupants, and drop them on the ground. After partly destroying the nest the Sparrows alighted on the ground beside their victims, and, being re-enforced by several of their kin, proceeded to enjoy the sanguinary repast.'"

But the injury to the gardener and fruit grower is still more direct:

"In addition to the indirect injury thus brought about by depriving our gardens and orchards of the protection afforded by our native insectiverous birds, the Sparrows cause a positive and direct loss to our agricultural industries amounting in the aggregate to not less than several millions of dollars per annum. The damage done by the Ricebird is limited to a single crop, and takes place during a few weeks in spring and fall, but the ravages of the English Sparrow affect almost every crop produced by the farmer, fruit-grower and truck gardener, and extend over the entire year. Indeed, it is safe to say that it now exerts a more marked effect upon the agricultural interest of this country than any other species of bird; and its unprecedented increase and spread, taken in connection with the extent of its ravages in certain districts, may be regarded with grave apprehension. In the early spring it prevents the growth of a vast quantity of fruit by eating the germs from the fruit buds of trees, bushes and vines, of which the Peach. Pear, Plum, Cherry, Apple, Apricot, Currant and Grape suffer most."

But it is not only the buds, but the fruit itself, which is eaten or mutilated so as to make it worthless.

Detailed accounts are given of its destroying Lettuce, Peas, Beets, Radishes, Cabbages, Cauliflower, Blackberries, Raspberries, Strawberries, Grapes, Tomatoes, Plums, Peaches, Pears and Apples. It appears to be particularly destructive to Grapes:

"The Grape industry, which is one of rapidly increasing consequence in this country, encounters in the English Sparrow an enemy second only to the phyiloxera and certain fungus growths. Already in some parts of the east it has become such a scourge that Grape culture can no longer be carried on with profit, it being necessary to enclose the ripening clusters in bags to insure their protection. At the end of the season of 1886, bitter complaints of damage done the Grape crop by Sparrows had reached the Department from twenty-five States and the District of Columbia, as follows: Alabama, Arkansas, California, Connecticut, District of Columbia, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisi-

:ana, Maine, Maryland, Massachusetts, Michigan, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia and West Virginia.

"In California, where this industry is of paramount importance, the English Sparrow has taken firm root and is multiplying and spreading with ominous rapidity, and unless steps are taken to wipe out the pest at the earliest possible moment the result will entail a loss to the State of many thousands, if not millions, of dollars. In this connection it is not reassuring to read, in the evidence collected and published by the Australian government in 1881, that 'in the short space of ten days the Sparrows took a ton and a half of Grapes' from the vineyard of JOHN CHAMBERS, of South Richland. Of the hundreds of testimonials which have been sent the Department of Agriculture by practical fruit growers, the following are suggestive examples:

"Mr. F. S. PLATT, of New Haven, Connecticut, writes:

"' Last year, when I had a large crop of very fine Grapes, I found that the Sparrows were destroying nearly all of them. I watched the birds, and found that they would pick out a fine bunch of fruit and peck a hole in nearly every Grape. This hole would be so very small that at first it would not be noticed, but very soon the place would begin to decay, and then the Grape would be ruined.'

"The Postmaster at Bowling Green, Ky., writes:

"' It has ruined my Grape crop almost wholly where unprotected.'

"Mr. WITMER STONE, of Germantown, Pa., writes:

"' It frequently despoils whole Grapes of their fruit, and pecks the bunches so that they have to be protected by paper bags.'

"Mr. THOMAS S. KENNEDY, of Crescent Hill, Ky., writes:

"' It eats Strawberries, Raspberries and Grapes. This past season it has been unusually destructive, and has torn the paper bags from the bunches of Grapes. It also eats holes in Apples and Pears hanging on the trees.' "

The bird also destroys a great amount of the various kinds of grain, particularly Wheat, Oats and Barley, and it has even invaded the Rice fields at the South, and one planter, in Louisiana, writes that it is more destructive than the Rice-bird.

It is shown to be nearly or quite useless in the destruction of insects and larvæ, and, in fact, protects them by driving away the Robin, the Baltimore Oriole, the Black-billed Cuckoo and the Yellow-billed Cuckoo, which are great devourers of Caterpillars.

"The destructive habits of the English Sparrow in Bermuda, Cuba, England, Germany, Austria, Russia, India, Egypt and Austraria are too well known to require more than a passing observation. In England alone the damage it causes has been estimated as not less than $3,850,000 per annum, and in Australia the loss is much greater. It threatens to become a more baneful pest to the American farmer and horticulturist than the grasshopper, caterpillar and Colorado beetle."

The Report recommends to the legislative bodies of the various States and Territories "the immediate repeal of all existing laws which afford protection to the English Sparrow.

"The enactment of laws legalizing the killing of the English Sparrow at all seasons of the year, and the destruction of its nests, eggs and young," and other legislation providing for the destruction of the birds by persons appointed for the purpose.

PEACH ORCHARDS IN WESTERN NEW YORK.

Two good crops of Peaches in two successive years, in this region, as we have just had, have turned the thoughts of many farmers toward planting Peach orchards, and now it is pretty well understood that there is to be a heavy demand upon the nurserymen for Peach trees for spring planting. The conditions for raising Peaches are no better now than they have been for the last twenty or twenty-five years, during which time Peach growing on a large scale may be said to have been abandoned. During all this time a few careful cultivators, in favored localities, have continued to raise this fruit with varying success—the measure of

their success, aside from severities of climate, having been their vigilance, industry and good management. The conditions of climate are no more favorable now than they have been through the last quarter century; the one disease most fatal to the Peach, the yellows, is more prevalent now than ever. The chances that Peach orchards will be remunerative are not in any way better now than they have been, and yet, because two favorable Peach years have just passed, a great number of persons propose to rush into a business of which they have no knowledge, and for which the most of them have no fitness. There can be no question as to the result; with the most of them it will be a failure. Precisely the same state of things existed in the south-eastern part of this State some six or eight years since, thousands of acres of Peach orchards were planted, and thousands of acres of the same orchards have been rooted out and plowed over, the most of them without bearing a crop. Notwithstanding this fact, there are, no doubt, certain favorable localities of limited area, in the Hudson River region, where Peaches are still raised with some profit by a few growers. If we should see the extension of Peach-growing to be gradual from centers that have proved favorable, we might then know it to be a healthy growth that would probably prove enduring, but a general movement, with no better reason for it than now exists, must surely meet with a general failure. There is no more wisdom in this movement than there is in that of attempting to raise vineyards, anywhere and everywhere, according to the advice of certain traveling dealers in vines, who are persuading people to plant vines wherever Corn will grow, assuring them that they can raise Grapes cheaper than Corn; a monstrous delusion.

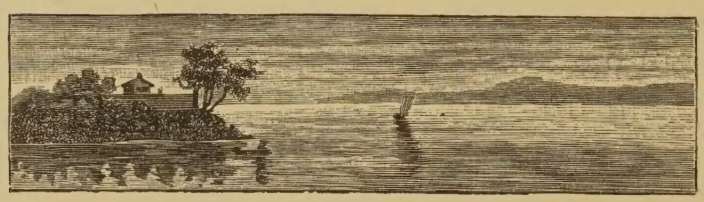
MY MORNING GLORIES.

The following lines, with the above title, by HARRIET NEWELL SWANWICK, lately appeared in the Chicago *Inter Ocean*, and are so well worthy of reproduction that no apology, nor words of praise need be said for their appearance at this time in connection with our colored plate:

I have loved you so long, Morning Glory,
Now I bring you a song, Morning Glory.
Lifting thy chalice up,
Heaven's dews to nightly sup,
Dainty thou art,
Sun-kissed by earliest beams,
Holding his freshest gleams
Safe in thy heart.

Opening thy petals fair, Morning Glory,
Yielding thy incense rare, Morning Glory.
True to the dawning day,
Wearing his colors gay
Only an hour,
High noon knows not thy face,
Full of winsome grace,
Beautiful flower.

Short-lived, but brave and bright, Morning Glory,
Blooming for our delight, Morning Glory,
Modest in all thy ways,
Seeking no meed of praise,
Teach me thine art;
Rude walls thou dost adorn,
Smiling o'er wastes forlorn,
This is thy part.



At the meeting of the American Pomological Society, the Niagara White Grape, with its close-berried clusters, was highly praised by a housekeeper of experience, as a jelly and cooking Grape as well as a dessert one. Mr. SMITH, of the Dominion Nurseries, St. Catharines, Ontario, says it keeps with him till March. A white, out door Grape that will ripen at the far north is a valuable addition to our Christmas desserts.

But the Jessica out-does in flavor any garden Grape known, and it is a wonder that no more is said of it. The little white Grape with its small clusters is not over attractive, but once between one's lips, you will avow it has all the good qualities a Grape can have in one. Sweet, with a honeyed touch, at first taste, succeeded by a freshness of mild acid and a bouquet that lingers on the sense, it is a Grape for connoisseurs to linger over and praise. Its straggling cluster might be improved by care—the grower did not seem to think much of it beside big Niagara, with not half as high flavor—which cannot be improved. It is a Grape for sick people, for dessert, for children who are nicer in their tastes for fruit than they have credit for, and it is a lady's Grape, above all. No Malaga is finer or half so juicy.

The forty-one varieties of native Grapes, from Mr. WILLIAMS, of Montclair, were interesting, and it must be full of interest to the grower to watch the fruiting of such noble vines. A collection like this is a life diversion, and it is a wonder more men do not find the exhilaration of such horticultural studies. The white Grape, Elvira, was remarkable in its full, crowded clusters, so thick the berries seemed to crush each other. The Early Victor, a black Grape of medium size, is worth growing for its fragrance alone, but the Agawam was the central triumph. There is a dessert Grape for you—a picture in its superb clusters of purplish-amber, varying like rays on the bunch, with a fragrance of Violets and frankincense, powerful enough, I should think, to scent an ordinary room. It is down on my list for the new grape trellis. The Cottage is a dark Grape of great cluster, and taking with its very modest name. The Black Hawk and Black Eagle were rich, deep hued varieties of noble cluster, and Noah was the name of an odd Grape in long clusters, that was green as Ontario's water, grass green, that looked like verjuice. It is a reflection on the patriarch to name such a vicious looking Grape after him, though probably it has no end of good eating qualities to balance its hue. NOAH planted a vineyard right after the flood, and every man wants to follow his example, and Mr. WILLIAMS' when he sees his Grapes.

The Arkansas fruit looked like that which people used to see in my childhood, in the Indiana valleys. I thought it could hardly be magnified in recollection, and have been looking for something of the sort for years. In my day the village folk would hardly buy, for twenty-five cents a bushel, the small, ordinary Peaches kindly offered in Boston streets for one dollar and twenty-five cents a basket—half a bushel. The Arkansas Peaches, sunburnt to swarthy crimson, luscious-looking, and all one could hold singly in one's hand, were like those an old farmer used to bring, Sundays, for the little mischief at whose house he took dinner after church. The Wabash soil then was what Arkansas is now, fat, teeming with fresh richness, and the fruit of such acres is a glory. The Apples were a show by themselves, two-pounders, some of them, and brilliant, distinct in varieties. That fruit is the best advertisement the State can have of its iron-tinged land, and there is as pretty country in Arkansas as lies out of doors for fruit raising. The finest high flavored Apples in the Union are grown in the warm valleys of Utah, but these Arkansas exhibits run them pretty close. I'm glad I have lived to see such fruit again.

The New England fruit, though moderate in size compared with the western delegates, was of an even excellence pleasing to see, and the Peaches were as highly colored and fine as one would ask to see. The English orchardists have an opinion that the older the tree the higher the flavor of the fruit, which might have been well tested by comparing the produce of old famous New England farms with the vigorous young orchards of the west. Other things being equal, why

should not this be true, and encourage growers to add to the list of hale, bearing orchards twenty-five and fifty years old that we hear of.

The Souvenir du Congres is the leading Pear for size and appearance, comparing on the first point with the prize Duchesse d' Angoulème, which used to fill the horticultural stage with their outlines. For looks, a ripe Golden Bartlett, pound weight and very tapering shape, gives the best idea of the specimens from E. B. WILDER, Dorchester, and the Arkansas contingent.

The prize collection of Pears from ELLWANGER & BARRY was enough to make one turn fruit-grower for life, and the varieties had a good deal of interest. Madame Von Kebold is a clear russet Pear, round and fine, betraying its Quince blood; the Clairgeaus were specially well colored, a point which tells of a thorough culturist. Bezi de la Motte is an odd, clear, apple green, full of darker spots, that ought to have high flavor. Therese Appert is a long-necked, warm yellow Pear, with russet tinge, highly attractive, which is not to be lost sight of in a dessert or market Pear. Among other choice varieties, the most striking were the Daimio, a yellow, round, Japan Pear, with the long, thread-like stem of its class. Angoulème Bronzèe, a rich, red russet, rare tinge in Pears, and the Soulard Bergamot, Quince-like in shape and fragrance, delicious in name and reality. The Jackson is a nice purple Pear, like a well grown Seckel, of Roman bronze shade. The bouncing Flemish Beauty, and Pitmaston Duchess were such Pears as one wants to eat, large, sound, odorous.

There is no use saying that fruit-growing is a failure when such fruit is the phenomenon and rarity it is. When such Pears line the market stalls, and a workman can buy one for five cents for his dinner, people will buy fruit to an extent undreamed of at present. With trees in full bearing, well cared for, fine Pears at five cents each will richly pay the grower. As things are, fruit is the extravagance of food, not the staple it ought to be. Cultivate, put on high culture, and the profit will come, even if it involves cheap transportation and a reversal of present traffic. No danger of the California fruit sending home productions out of market, when the big railroad freight must be added to its price. I see heaps of it going to decay on fruit stands, for people cannot afford to buy at its rates. These good Pears for ten cents is equal to paying five dollars a bushel, or like paying twenty-five cents apiece for Potatoes. One cent for a good ordinary Apple or Pear on the fruit stand is all that the public can afford to pay, and things should be so managed that the grower should reap fair profit at this rate. Between those who pile up prices, wishing to make all there is, and those who cut rates down to a fraction of a cent, fruit growing and growers suffer. It ought to be in the power of the million fruit-growers to combine and regulate the market. Farmers and authors are more in the power of the public they serve than they ought to be, or would be if they had one grain of business capacity, and it will have to be the chief interest of all pomological and horticultural societies and journals to study this matter, and develop a just sentiment among growers for their own protection.

The exhibition will keep my pen in notes for the rest of the year. It was the only show I have been able to see for a year, owing to ill health and pressure of cares, and a misguided conscience was against taking the time to go to the Pomological. But memories of President WILDER and other genial savants of fruit growing make it a sort of memorial rite to go to the Society shows whenever they come round. As usual, I found that I could not have afforded to stay away. The sight of well remembered faces among the fruit princes is not least of the pleasures gained, and the introduction to new specimens, and notable growth of older ones is a lesson and a stimulus. One ought to make a point of going to fairs, not merely as a holiday, but to learn and to teach the children. What one grower has done another can do if he tries hard enough. I want such fruit as took prizes, for my own table and delight, and what's more, I'm going to have it, if I have to dig and root-prune every one of those thirty-five fruit trees out in the garden with my own hands.

There was a melancholy undertone in hearing men speak of "Mr. BARRY'S SON," and "Col. WILDER'S SON," in place of these venerated premiers among

culturists, one never to appear at exhibitions, that he loved, again, the other unable, through ill health, to attend, but able, I hope, to receive the cordial "rising vote" of all present, by which the Society sent its regards to its GLADSTONE of fruit-growers.

SUSAN POWER.

ALONSOAS.

The Alonsoas, or, as they are popularly known under the name of Mask Flower, form a genus of handsome, free-flowering, tender, perennial, greenhouse plants, belonging to the natural order Scrophulariaceæ. They are plants of spreading habit and dwarf growth, growing about sixteen inches in height, and when well grown are very useful and ornamental, suitable for bedding purposes during the summer season, as well as for conservatory decoration during the winter months. They are especially desirable for the flower garden on account of the brilliant scarlet color of the flowers, which are produced in small terminal spikes. Properly speaking, they are greenhouse plants, but they do well when treated as annuals, and in this way can be grown by many who have not the necessary facilities for growing them otherwise. They can be easily grown in beds, and do best when given a sunny situation and a deep, well enriched soil; but as they are natives of South America, they are very tender, and should not be planted out until the weather becomes warm and settled, which, in this vicinity, is about the middle of May.

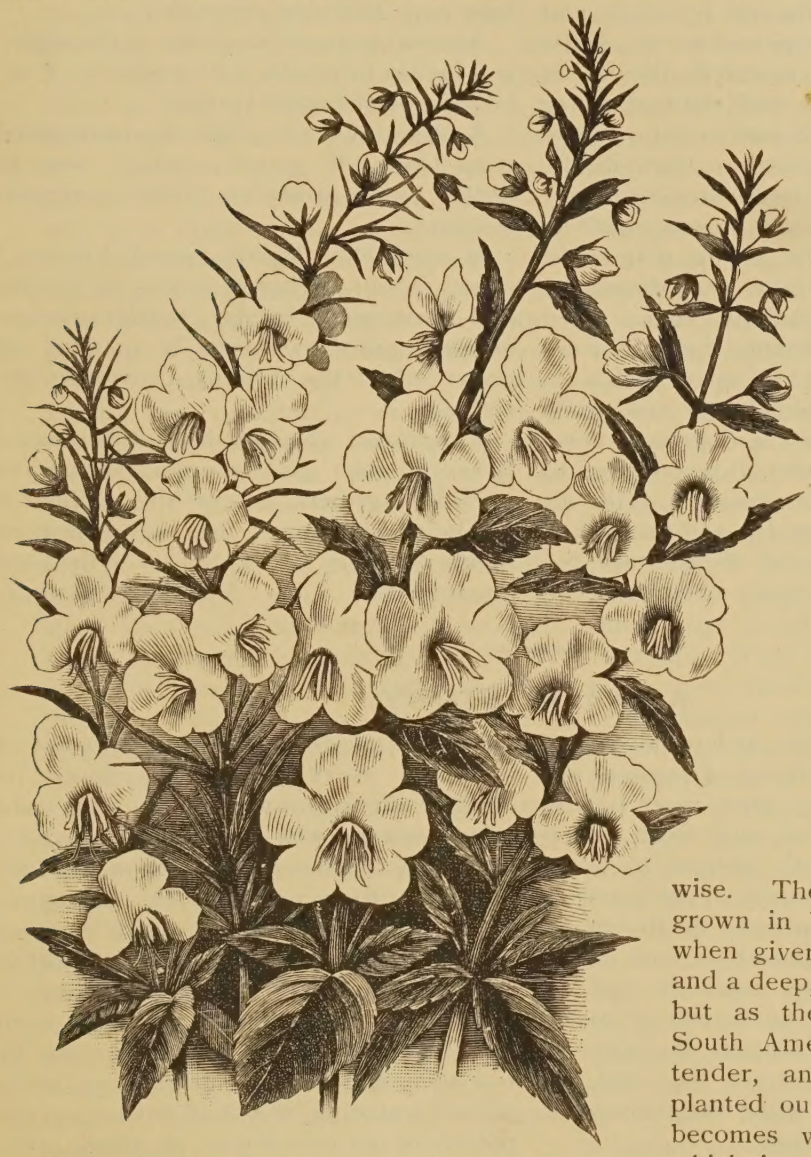


FIG. 1. FIG. 2. FIG. 3. FIG. 4.
A. MYRTIFOLIA. A. LINIFOLIA. A. WARSZEWICZII. A. GRANDIFLORA.

When grown as pot plants for winter decoration, a few of the smallest should be cut back into shape about the middle of August, and early in September they should be taken up carefully and potted. Use pots proportionate to the size of the plants, and see to it that they are well drained. Give them a compost of two-thirds well decayed sods and one-third well decayed manure, thoroughly mixed. When first potted, water, and then place in a shaded situation for a week or ten days to enable

them to take hold of the soil. When brought inside they should be given a light, sunny situation, an average temperature of 55°, and care should be taken to give them a proper supply of water at the roots, for if this is not done the lower leaves will turn yellow and drop off, and thus materially injure the appearance of the plant. With only ordinary attention they can be kept free from all insect pests, and this is quite a point in their favor.

Propagation is effected by seeds and cuttings of the half-ripened wood. If the former method is adopted, the seeds should be sown in a well drained pot or pan filled with light loamy soil, as early in the season as possible. Sow thinly, cover slightly, and place in a warm, moist situation, as close to the glass as possible, and as soon as the young plants are large enough to handle, they should be transplanted into shallow boxes filled with turfy loam, placing them in rows about an inch and a half apart each way. Keep the young plants close and moist until well established and growth commences, when they should be removed to a cooler atmosphere, where a little air can be given occasionally, and there they can be grown on until the weather becomes warm and settled, when they can be planted outside. After the plants are an inch or so in height, pinch out the center shoots occasionally, so as to cause the plants to branch.

Cuttings of the half-ripened wood will root quickly if placed in sand and given gentle bottom heat. Young plants should be rooted early in the season, and potted off into two or three-inch pots, or shallow boxes, as advised for seedling plants, and to which they should be similarly treated.

The following is a list of the most distinct and desirable varieties:

Alonsoa grandiflora grows about eighteen inches in height, and produces flowers of a bright scarlet color.

A. Warszewiczii, originally introduced from Chili. It grows about a foot in height, and produces bright crimson flowers.

A. myrtifolia, (Myrtle-leaved Alonsoa,) grows about eighteen inches in height, and produces bright scarlet-crimson flowers, more compact in manner of growth than the varieties previously described.

A. linifolia, (Narrow-leaved Alonsoa.) A very distinct and beautiful variety, of pyramidal growth, and on this account it can be readily grown into nice specimen plants; flowers small, but of a brilliant scarlet color.

CHAS. E. PARNELL.

A COLOR STUDY.

Though the bloom laden boughs of springtime and the Roses of summer are gone, there is yet a richer, rarer beauty in garden and forest and field, which lovers of nature will delight to heed. Yet, viewing with the eye of the horticulturist, all the panorama of loveliness which autumn has spread for our enjoyment, we are led to conclude that we have much to learn in the way of planting for autumn decoration, for, with all our care, our lawns are but dull for weeks, at a season when they should be at their richest and best.

Give nature full rein, and what shall you see?

> "Golden gleams by every brook,
> Crimson lights in every nook,"

and beauty running riot everywhere.

Every knoll has its watch-fire of glowing color. Every cliff its veil, embroidered in leaf and vine, which no human skill can imitate; every stump its bit of carmine; every rough tree trunk its climber of crimson and green. It is hard to understand why so much of beauty, such fairy touches of decoration, are hidden away from prying eyes. Is nature shy of man, that she sets her choicest gems of color and artistic arrangement in the midst of the swamp or the bosom of the forest? Then let us woo her, until she shall light her autumn fires close by our own door-stones; until, even while we are watching, she shall dash upon the palette of our own lawns, all those artistic commingling of tints, which she loves to lavish on an autumn forest.

One needs good knowledge of the color taken on by shrubs and trees before planting for autumn beauty, and there are some which yield a double joy. The Forsythia, fine in its spring yellow, is yet finer in its purple autumn dress.

The Snowball is as striking an object now, for its carmine tintings, as for its earlier white.

Spiræa prunifolia, lovely with its springtime wreaths and wands of snowy blossoms, gives even better account of itself now, with its delicate gradations of pink and glossy crimson.

But, the Ivy! Gorgeous in its unmatched hues of carmine and maroon, see how it riots over the face of the cliff; flings banners of victory over every surmounted stump; dashes its gory color in the face of every hindering bank, and even climbs to the tops of the tallest trees to fling its blood-red pennants to the breeze. What a wild, savage thing it is; plainly it says, "Admire me, but—hands off! I am nature's own child, and will have none of your meddling; but if you will come with your man, and your hooks, and your ladders, your books and your presses, to steal my choicest tints from the very tree tops, stand, then, and take the consequences." And, as they are not over pleasant to most people, it is well to be warned in time, and admire the Ivy at a distance. But the Virginia Creeper, its first cousin, has been wooed and won, and, trained to one's liking, may be depended on for an autumn display of richest color and grace; nor must its berries be forgotten, for their purple tint forms the missing note in the chromatic scale of color which the vine presents, from the most delicate green through all the reds and browns to almost black.

Down by the brook, over which the Willows are bending, there are dusky nooks and shadowy places, loved for their coolness in the summer heat; now that the sun has lost somewhat of its power, decorators may find a hint in the fact that here the Golden-rod has lit its mellow light, the purple Aster blooms in pleasant contrast, and the Sumac here lends warmth by its crimson glow. So autumn lights her torches as summer joys depart.

The Sumac, "that shrub of grand surprises," must not be passed with a single word. It will grow anywhere; on barren soil it will run, perhaps, to different shades, but not less rich color than on better soil. It is an ever varying wonder. Sometimes it gives great plashes of crimson, then a bewitching confusion of all hues most harmoniously blended. Wild and untamed, it knows no rules, obeys no laws, but frolics in mad-cap beauty. A large clump planted against a background of Hemlock, with its shades of rich, fruity green, gives an effect than which what could be finer? Even its polished stems, bearing immense cones of dark hued berries, are fine in their way after the leaves have fallen; and there is that about this untamed shrub which will delight the eye wearied with conventional forms, and so linger in the memory after many more cherished things are forgotten.

The Maples deserve a chapter by themselves, but we may only hint at their beauty in a few short sentences.

Standing out against the monotone background of forest, and earth, and sky, you may, perchance, remember one grand specimen, which, year by year, is a perfect cone of crimson. You grow to know it, individualize it—love it. It seems to you like a beacon of hope in a world of discouraging circumstances. You weave practical fancies about it—make friends with it—and, like many another friend, it will suddenly show a very different side to its character; for, this year, it is a veritable "turn-coat," and after a frosty night or two will come shining out in all the glory of undiluted sunshine. With never a hint or a dash of crimson about it, to give an inkling of its former status, like a "sunset at noon-day," with a radiant beauty all its own, it stands as a bath of gold—a wonder and a puzzle to all who note the change. Another year it may give you a fresh surprise by appearing in mottled hues; but never mind, another year and you shall have your friend back again, all the better beloved for its masquerading. By some subtle change in soil, or air, or water supply, was the alteration effected; but never is there disappointment in a Maple tree, whether it be in springtime, when its fringy blossoms are a distinct challenge to the honey-bee to come and taste their sweets, and its buds break to tender crimson leaves, and these again merge to tender green, whether it be in the full leafed verdure of summer, when each branch with the leaves set upon it seems as clear cut as a cameo, or when the frosts of autumn have given it its royal robe of color, it is

a pleasure always. If Vermont and New Hampshire show the more choicely mottled leaves, and New York the warmer color, the more varied tints of yellow and green are found at the west, and gorgeous as it is, the Maple everywhere gives an effect to refined beauty.

The Poplars have a strange foreign look, with their dull yellow leaves and ghostly boles and branches, and yet how striking and pleasing a feature they form in the fairest landscape.

A royal tree is the Linden, in its yellow robes, subdued, yet never sad, it gives you cheery welcome in its large way, by a hospitable spread of branches and generous opening of heart seldom seen in other trees. Is it a fact that, if left to nature, it always grows seven in a clump, that is, seven stems from one root, or is this only a local peculiarity?

One of the prettiest natural effects within my range, is a small thicket of Hawthorn, Plum and wild Crab Apple trees, over which a Grape vine has grown rampant. In spring, the pink and white blossoms, their perfume, and the cheery hum of the bees, make the spot like a dream of fairy land. Later on, the vine has formed a verdant canopy upon the now leafless trees; but in autumn it turns to a shower of gold, through which the crimson of Thornapple, the blush of Plum, and the purple of Grape peep forth in tempting beauty.

It is not the province of this article to give a list of fine things for autumn planting, for, in the "sweet reasonableness," which is good taste, things are only beautiful when harmoniously set,) but to emphasize the opportunities of those who desire to beautify their home places, which, to the earnest seeker an intimacy with nature and the present season affords,

——"the season, when the light of dreams,
Around the year, in golden glory lies,
And heavens are full of floating mysteries."

DART FAIRTHORNE.

INTRODUCED PLANTS.

The great majority of our troublesome weeds are introduced from foreign countries, and a record of their first appearance and subsequent distribution is interesting, not only to the horticulturist, but to the botanist and ethnologist. To the botanist the study of the distribution and spread of introduced plants, as we are able to trace them in the comparatively limited time since plants were first studied, gives great aid in determining the manner in which plants were originally distributed. To the ethnologist the study of introduced plants is of the greatest importance, as the migrations of man can often be traced by them. It is claimed, and is doubtless true, that the nationality of settlers on a certain spot can be determined by the weeds that are left, and many illustrations can be given to prove the statement. Even to the present day, the course of the tribes that came from Asia to Central Europe during the middle ages, is marked by certain plants peculiar to the Asiatic steppes that followed them.

Our American Indians call the Plantain, Plantago major, the Footsteps-of-the-Whites, as though produced by the tread of the European pioneers; it certainly has followed the European colonists wherever they have gone, and is now found in all parts of the world, carried through man's unconscious aid from its original home in Northern Asia. This plant was found in Northwest America by early explorers, and may have been carried there by early Aleutian colonists from its home across Behring Straits. The Thorn Apple, Datura Stramonium, a native of Eastern Asia, was gradually spread all over Europe by Gipsy bands, who made frequent use of its poisonous qualities. After the war of the deliverance the Tick seed, Corispermum Marshallii, a plant allied to our Chenopodium, and confined originally to the steppes of the Dneiper, was found wherever the Cossacks had encamped. Our Water Weed, Anacharis Canadensis, here a harmless plant, growing in ponds and shallow streams, was introduced to England about 1842; it began immediately to spread with great rapidity through the subdivision of its roots and stems alone, and soon filled ponds and rivers all over Great Britain, in many cases to such an extent as to seriously interfere with navi-

gation. Later it was introduced to Germany, and is spreading there with equal rapidity.

We know what a pest the English sparrows are becoming in our own country, and how destructive the English rabbits became when introduced to Australia. That plants, harmless in their native homes, can become terrible pests when brought to a new country is illustrated by the example given above and others equally as remarkable.

In South America the Cardoon, or Artichoke, Cynaria cardunculus, was introduced soon after the European colonists landed, in 1635. It spread rapidly, and now covers hundreds of square miles with a prickly growth that has driven out all native plants, and presents an impenetrable barrier to man and beast.

Many plants, when introduced to the garden for ornament, find their new home especially favorable, and escape to the roadsides and fields, where they often become troublesome weeds. The wild Toad Flax, Linaria vulgaris, was brought from Wales to a garden in Philadelphia, escaped to the fields and soon after was described as "the most hurtful plant to our pasture that can grow in our northern clime." "It is now spread over a great part of Pennsylvania."

The White Weed, Leucanthemum vulgare, was also introduced to the gardens, and is recorded as having been cultivated in the early colonial times. It soon escaped, and is called, as early as 1758, "a very destructive weed, taking full possession of the ground, so that the fields will look as white as if covered with snow."

The Bouncing Bet, or Soapwort, Saponaria officinalis, another of the old garden plants, is frequently found about old houses, along roadsides and walls. It does not spread very rapidly, but is difficult to eradicate when once established.

In the days of our grandmothers and great-grandmothers, back to the earliest time, the herbs were in every garden, and each had an important place among the simple remedies of the times; now they are seldom cultivated, but we often see them about the old houses and spots where houses once stood. They are a pleasant reminder of times past, if they have outlived their usefulness. To this class of plants belong the Tansy, Tanacetum vulgare; Motherwort, Leonorus cardiacus; Catnip, Nepeta cataria; Celandine, Chelidonium majus, and Elecampane, Inula Helenium.

Not all our weeds and introduced plants come in by the way of the garden; many are introduced in packing in the the ballast of vessels, among grain and grass seed, and in many other ways without the conscious aid of man. An early writer, in 1764, enumerates a list of plants that had sprung up since the English planted and kept cattle in New England." Many of them are now to be found in all settled parts of our country, and will be recognized as old enemies by all who cultivate the ground. The following plants are among those named: Nettle, Urtica dioica; Couch Grass, Holcus lanatus; Shepherd's Purse, Capsella Bursa-pastoris; Groundsel, Senecio vulgaris; Sow Thistle, Sonchus oleraceus; Mallows, Malva rotundifolia; Docks, Rumex crispus, R. sanguinea, R. patientia; Knot Grass, Polygonum aviculare; Chickweed, Stellaria media; May Weed, Maruta Cotula; The Great Clot Burr, Lappa major, and the Mullein.

Many introduced plants do not gain a permanent foothold, especially those growing from the ballast deposited from ships. They grow a few years, then disappear, others that would become troublesome if growing in cultivated ground become exterminated by the improvements that are constantly going on about large sea coast cities, where such plants are most abundant.

There are plants now in our gardens, and advertised by reputable dealers, that will become a pest wherever introduced. Bocconia cordata, Calystegia pubescens fl.-pl., and Ægipodium podograria variegata, are plant names that should be looked upon with suspicion, the plants to which they belong should never be allowed in a well-ordered garden, and should never be recommended by dealers, excepting for the wild garden. They would all be desirable plants if they were not so very weedy, but after they are once in the ground it will take an immense amount of muscular persuasion to remove them again. Another very pretty plant that is growing more and more common, is Convolvulus arvensis. It has an abundance of pretty flowers, like a small Morning Glory, and for their

sake is sometimes brought into the garden; but when once in it is almost impossible to get it out. It is equally as bad as the Canada Thistle.

All weeds should be kept in check. It can be done and will make the work much lighter than it will be if they are allowed to go to seed once or twice during the season. It is very much easier to destroy young weeds than those that are well established and deeply rooted. Not only does the gardener injure his own land by allowing weeds to go to seed, but the wind is very sure to carry a good supply to his neighbor. There is in some States a law requiring that certain weeds be destroyed. It would doubtless be worth many thousands of dollars to farmers and gardeners all over the country if such a law could be applied and enforced everywhere.

WARREN H. MANNING.

SEED SAVING.

We hear it frequently said that, "Saving seed doesn't pay when seeds can be bought so cheaply," and the old-time seed bag filled with the choicest flower and vegetable seeds wrapped in pieces of old calico, and tied with home-spun yarn by the careful hands of an old aunt or grandmother, is a thing of the past. But it is in our day well to save seeds from fine plants, as often from its planting something entirely new may be obtained. Those who are in the business find it specially desirable to mark a number of vegetables that are nearest perfection and save the seed, while those who cultivate flowers take a similar course.

Much may be done from seeds alone, and among the flower seeds worth saving are the Phlox Drummondii, of vivid colors, and the pure white, which should be wrapped in separate papers and carefully labelled. The dwarf varieties of Marigold must not be neglected, as when seed-sowing time again comes, bright color will be sought for, and the Marigolds are highly ornamental in bronze and vivid yellow.

The dwarf Lobelia, with its pretty blue blooms, and Ageratum, with the old-fashioned Larkspur, must not be forgotten for next summer's flower garden.

Mignonette, no one ever gets too much of its delicate fragrance; if you depend on bought seed you may and you may not get a good start, as often seeds are old and useless, having been "for sale" too long.

With all our blue flower seed, we must have the yellow bloomers, the Golden Feverfew, and if convenient to save from fine healthy plants, add to the seed bag a paper each of white and purple Candytuft. Then, in some old-fashioned gardens, there grow beautiful Petunias. Make an exchange with the gardener and secure a packet of mixed Petunia seed. Petunias never grow out of date, for they are always beautiful, and flower if they are given the slightest chance.

Then, Verbenas are said to do better when coming from the seed than after being kept over; one wants the seed from that royal velvety purple, with a large eye; also of the vivid crimson plants, and the pink one, which has kept on blooming the entire season.

Japan Pinks make a beautiful spot of color, varying from the dark to the light shades, nearly as handsome as the aristocratic Carnation; from the finest blooms save seed, which will richly repay proper cultivation.

And the Balsam may be coaxed into large, beautiful, many-colored blossoms, which make up into handsome floral pieces. An oval glass platter filled with wet moss and trailing grasses studded thickly with large, perfectly formed double Balsams, of rich and variegated hues, arranged by the deft fingers of a daughter of the household, eclipsed the more pretentious designs arranged by the florist for a banquet table.

Lastly, but most important, save only the seeds of the finest Pansies, the rare shades and perfect petalled specimens. I have sown inferior seed, which I knew came from weak plants and small flowers, and the result was flowers pale in color, not worth looking at.

"Many a mickle makes a muckle," and the amount saved by the careful gathering of choice seed from strong plants will enable one to spend the more for rare and valuable treasures of the floral and vegetable kingdom. ELLA GUERNSEY.

FOREIGN NOTES.

CHEMISTRY OF PLANT LIFE.

At the late meeting of the British Association, the following remarks on the chemistry of vegetation formed a portion of the address by the President, Sir HENRY ROSCOE:

The phenomena of vegetation, no less than those of the animal world, have, during the last fifty years, been placed by the chemist on an entirely new basis. Although before the publication of LIEBIG's celebrated report on chemistry and its application to agriculture, presented to the British Association in 1840, much had been done, many fundamental facts had been established, still LIEBIG's report marks an era in the progress of this branch of our science.

As proof of this I may remind you of the attack which he made on, and the complete victory which he gained over, the humus theory. Vegetable physiologists up to 1840 continued to hold to the theory that humus, or decayed vegetable matter, was the only source of the carbon of vegetation. LIEBIG came to the conclusion that it was absolutely impossible that the carbon deposited as vegetable tissue over a given area, as, for instance, over an area of forest land, could be derived from humus, which is itself the result of the decay of vegetable matter. He asserted that the whole of the carbon of vegetation is obtained from the atmospheric carbonic acid, which, though only present in the small relative proportion of four parts in ten thousand of air, is contained in such absolutely large quantity, that if all the vegetation on the earth's surface were burnt, the proportion of carbonic acid which would thus be thrown into the air would not be sufficient to double the present amount. That this conclusion of LIEBIG's is correct needed experimental proof, but such proof could only be given by long-continued and laborious experiment, and this serves to show that chemical research is not now confined to laboratory experiments lasting perhaps a few minutes, but that it has invaded the domain of agriculture as well as of physiology, and reckons the periods of her observations in the field, not by minutes, but by years.

It is to our English agricultural chemists, LAWES and GILBERT, that we owe the complete experimental proof required. And it is true that this experiment was a long and tedious one, for it has taken forty-four years to give the definite reply. At Rothamsted a plot was set apart for the growth of Wheat. For forty-four successive years that field has grown Wheat without addition of any carbonized manure, so that the only possible source from which the plant could obtain the carbon for its growth is the atmospheric carbonic acid. Now, the quantity of carbon which on an average was removed in the form of Wheat and straw from a plot manured only with mineral matter was one thousand pounds, whilst on another plot, for which a nitrogenous manure was employed, fifteen hundred pounds more carbon was annually removed, or twenty-five hundred pounds of carbon was removed by this crop annually without the addition of any carbonaceous manure, so that LIEBIG's prevision has received a complete experimental verification.

LIEBIG'S views on the absorption of nitrogen have not been substantiated. He imagined that the whole of the nitrogen required by the plant was derived from atmospheric ammomia, whereas LAWES and GILBERT have shown by experiments of a similar nature to those just described, and extending over a nearly equal length of time, that this source is wholly insufficient to account for the nitrogen removed in the crop, and have come to the conclusion that the nitrogen must have been obtained either from a store of nitrogenous material in the soil or by absorption of free nitrogen from the air. These two apparently contradictory alternatives may perhaps be reconciled by the recent observations of WARINGTON and BERTHELOT, which have thrown light upon the changes which the so-called nitrogenous capital of the soil undergoes, as well as upon its

chemical nature, for the latter has shown that under certain conditions the soil has the power of absorbing the nitrogen of the air, forming compounds which can subsequently be assimilated by the plant.

ROSE MARSHALL P. WILDER.

In a late number of the London *Garden*, T. W. G. writes as follows:

Marshall P. Wilder has definitely proved itself to be nothing more nor less than Alfred Colomb. There were considerable misgivings as to its distinctness as soon as it appeared, but the great and well deserved reputation of its raisers and the fineness of the flowers that the variety produced compelled a most careful and patient trial. It has been often remarked that the same season rarely sees both Marie Baumann and Alfred Colomb at their best; 1886 was rather a Marie Baumann year, and Alfred was not seen to advantage; neither (? consequently) was Marshall P. Wilder, and no one was prepared to state definitely that it was distinct. This year, however, it was Alfred Colomb's turn, and, oddly enough, also Marshall P. Wilder appeared in equal perfection. For convenience of comparison the rows of these two Corsican brothers had been worked close together, and as they grew under precisely similar conditions, the resemblance in every respect became daily more apparent—wood, foliage, prickles, all identical until the day that saw Alfred Colomb burst into full beauty witnessed the simultaneous development of Marshall P. Wilder. Six blooms of each were cut and staged together in a twelve box, and several good judges failed entirely to say which was which, or wherein one differed from the other. On one occasion the introduction of a bloom of each into a collection of distinct varieties would have resulted in the disqualification of the box for containing two Alfred Colombs, but that the judges knowing their Roses well, recollected the close similarity of the "American Cousin." It is not incredible that there may have been raised in America a seedling in all respects identical with Alfred Colomb, for there is no lack of recorded cases of such coincidences; but it cannot be believed that any skillful grower of a good number of plants of the two can possibly distinguish by any difference of wood, foliage, stature, size, form, or color of flowers, or time of blooming between Marshall P. Wilder and Alfred Colomb.

TRIALS OF A FLORIST.

A correspondent of the *Journal of Horticulture* states that, according to a Cologne paper, Baron NATHANIEL DE ROTHSCHILD—not the chief of the great plutocratic house—has been expelled from Vienna. The Baron is a great florist, and in all his villas and castles carries on the culture of rare exotic plants upon a very costly scale. The Archduke KARL LUDWIG, the Emperor's brother, visited one of the Baron's gardens during the absence of the owner, in order to get a glimpse of some of his rare plants. The Archduke is the foremost patron of art and science in the Empire, and a great favorite with the cultivated classes and the people. Baron de ROTHSCHILD had given the order that no one should be allowed to inspect his forcing houses during his absence, but the head gardener conceived that the order could not extend to so important a person, and so admitted the Archduke. When the Baron heard that his order had been disobeyed he at once dismissed the head gardener. The Archduke wrote to the Baron begging him to revoke the dismissal. The great monetary prince, however, would not grant the petition of the Imperial Prince. The Municipality of Vienna were indignant at this rudeness to the most popular and liberal member of the Imperial family, and gave the Baron to understand that he must either concede the Archduke's request or forfeit his own citizenship. The Baron chose the latter alternative, and has voluntarily ceased to be an "Austrian."

BEGONIA FUCHSIOIDES.

This is generally spoken of as a winter-flowering Begonia, but it blooms so continuously, winter and summer alike, if favorably situated, that the merit of being a perpetual bloomer might well be claimed for it. As a pillar plant in a warm greenhouse, or cool stove it has few equals, for the beautiful wax-like, bright colored blossoms which hang in such profusion are greatly enhanced by the pleasing tone of the foliage.

H. P., in *The Garden.*

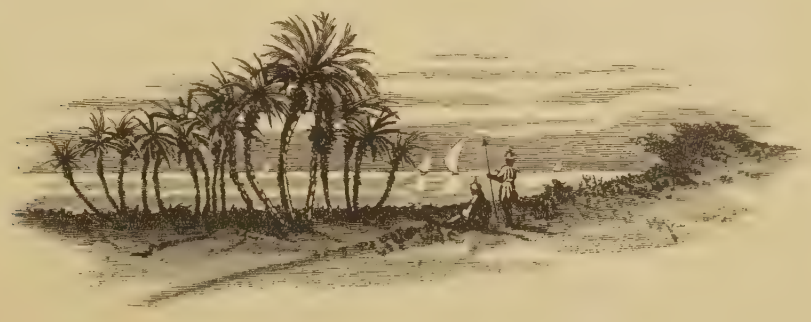
NITROGEN IN LEGUMES.

It is well known that the Leguminosæ form nitrogenous matter in large quantities in their tissues, even when growing in soil wherein the nitrogen is not in excess. It is known also that nitrogenous manures are not specially beneficial to these plants, hence the question as to the source of the nitrogen they contain is one of much interest. M. HELLRIEGEL, as quoted in the *Annales Angronomiques*, attempts to answer the question. With BOUSSINGAULT, LAWES and GILBERT, and other modern chemists, HELLRIEGEL shows that free nitrogen is not absorbed from the atmosphere as such. The bacteria in the soil, however, form, or cause to be formed, nitrogenous compounds in the soil, and these bacteria are very abundant in the little swellings that occur on the roots of Leguminosæ. M. HELLRIEGEL tested the matter by sowing Peas in soil deprived of all nitrogenous matter, in several pots. In some of these pots bacteria were purpously introduced, while the others remained free from them. Germination proceeded as usual; the plants grew up and went on well till the food stored up in the seed was exhausted. After that time the plants in the soil with no bacteria were gradually starved, while those plants which had the benefit of the bacteria flourished, and on an examination of their roots the tubercles were found to be highly developed. According to these and other experiments made by M. HELLRIEGEL there is thus a direct relation between the appropriation of nitrogen by Leguminosæ and the presence of bacteria in the tubercles on their roots. On the other hand, Professor MARSHALL WARD'S researches show that what have been taken for bacteria are really the germs of some fungus allied to Ustilago. But, if it be so, the action of these fungoid germs may be of the same nature as of the bacteria.

A WARWICKSHIRE WEDDING.

In a homely little garden I recently saw a combination which some of your readers may consider worth repeating in their own way. It was only a sunny corner, backed by an old, grey, sandstone wall, and flanked by hedges of dense dark Yews, but on the wall the white-wreathed "Virgin's Bower" was at its best—sweet and white—chaste and cool as alpine snows seen from a warm valley in summer time. Along the narrow border some garden artist, in a moment of inspiration, had placed a few roots of the scarlet-flowered Tropæolum (T. speciosum), and when I saw the result a day or two ago, it was a garden-picture good to look upon. No bare words could tell of the intertwining beauty and grace of these two hardy plants as thus luckily combined. *Imprimis*, the sandstone wall was enriched at its base with bosses of dark velvety moss, its upper part embroidered with lace-like Lichens of silver-grey, lemon and orange. Over this hung loosely the snowy wreaths of Clematis, either alone or mingled with the glowing crimson Tropæolum flowers. I had just seen Vandyke's Henrietta Maria at Warwick Castle—the garden queen to whom PARKINSON dedicated his "Garden of Pleasant Flowers"—had looked over the whole of the Shakespeare country from GUY'S Tower, but, with my eyes filled with the finest of art treasures, my heart was full of this most sweet and happy wedding in a tiny garden.

VERONICA, in *The Garden*.



PLEASANT GOSSIP.

LILIES IN POTS.

In the January number of your MAGAZINE, this year, you had an article on growing Lilies in pots instead of the usual way of growing them in the ground. In the spring I sent to you and got a few bulbs, and treated them as near to your directions as I could. The magnificent Japan Lily grew and had two flowers, and they were truly magnificent. They measured nine and three fourth inches across, and were the wonder and admiration of all who saw them. The L. lancifolium grew a little, then died down. Will the bulb be good next season? The Easter Lilies I have yet to plant. Would like some at next Easter time, if I can make them grow. After putting the bulbs in the pots do they need to go out of doors and freeze before they will bloom, and do I need to treat the L. auratum in the same way to have it bloom next season? The article in your MAGAZINE failed to state the treatment of the bulbs after blooming. Will you please answer in your next number, and oblige A SUBSCRIBER.

The Lilium lancifolium bulb which grew a little, then died down, is very likely by this time dead entirely. Nothing definite being said as to the length of time it grew before dying down, it is impossible to speak positively about it with regard to next season. If the growth was small merely, but still healthy, and if the dying down process was slow and natural, the bulb is most likely all right. But I fear, from the manner of the writing, that it was a weak, yellow, short-lived shoot, that soon decayed instead of ripening. If so, the soil should have been removed down to the bulb, to allow examination, the decaying part removed, some dry sand applied as a styptic, and in this way the bulb would have been saved, and should then have been left in the pot, laid away on its side until next spring; and if the bulb is still alive, all that remains now to be done is to lay it away on its side in some cool place where the pot will not be broken by frost.

The Easter Lilies do not require freezing, although a little frost will do no harm if the changes either way are not allowed to be unnaturally sudden.

For all Lilies in pots, whenever the foliage commences to show signs of ripening off by turning yellow, water less frequently, but give enough to penetrate the entire ball of soil. When the foliage is nearly all yellow, turn the pots on their sides and pack sand, coal ashes or leaves about them to prevent drying out. All that is necessary then is to keep so that the pots are not broken by frost until spring. Freezing is not necessary, but will not hurt the bulbs if well protected from rapid changes. JAMES BISHOP.

BURNT BONES FOR PLANTS.

Would you please tell me, in your MAGAZINE, whether burnt bones pulverized are much good in pot culture, and if so, how they should be used?

REV. A. L. R., *Petrolia, Ont.*

Pulverized burnt bones contain all the phosphate of lime originally in them and are valuable for plant growth; to what extent will depend upon the kinds of plants the material is used on, and the condition of the soil. If used in excess of the real requirements of the plants it would probably not be injurious to them. For house plants its real value could be established only by trial.

BLOOMING OF MINA LOBATA.

I notice, in your MAGAZINE for October, that the Mina lobata, though a free-growing vine, has failed to flower with you. Mine, planted out in May, from seed sown in a box, produced some flowers during the latter part of September, a specimen of which I send you. It is not nearly so large as represented in your issue of February, which I attributed to the ground being hard. Every wash day I gave it a pail of strong soap-suds, which may have caused it to bloom.

The Lion's Tail deserves a mention. It is in full flower now, and although not so large and ornamental as shown in the engraving, makes a pretty bush of orange colored flowers.

MRS. C. A., *New Brighton, N. Y.*

OUR READERS' EXPERIENCES.

We are pleased to publish the remarks in this department, in the present and last numbers, in regard to the Wax Plant. Nothing is more encouraging to amateurs than to have the actual experiences of those situated like themselves. We

hope to hear from others until all the facts relating to the house culture of the Hoya shall be known.

We cannot refrain from expressing the wish that our readers will not hesitate to supply us freely with notes in regard to all their gardening matters; house plants, garden plants, flowers, fruits and vegetables. Let us have failures as well as successes, for the former teach as valuable lessons as the latter.

GARDEN AND ORCHARD NOTES.

The Triumph Sweet Corn is the latest variety we can grow for market on Lake Memphremagog, although it is called "second early" by some seedsmen. It is a very sweet and satisfactory market Corn, bearing two good ears to the stalk.

This has been a "watermelon year" with us, and Tomato vines have ceased their growth and ripened up their whole crop. Hubbard Squash vines are still green and growing at this date, October 14th, and no frost has appeared around the lake.

The Red Beitingheimer Apple has unexpectedly proved itself an iron-clad here, and its whole aspect indicates a Russian origin, notwithstanding its German name. There are many German settlers in Russia, and quite a number of Russian Apples bear German names. But I have never seen a true German Apple that is iron-clad. The nearest to it, Belle de Boskoop, which I received a good many years ago from CHARLES DOWNING, is quite tender, although hardier than Gravenstein. The foliage of Beitingheimer is markedly Russian in its firm texture and large size. I have not, however, examined it microscopically, for the "double row of palisade cells," which Professor BUDD considers characteristic of the leaf of a true Russian Apple.

Pasovka, "a hardy Polish Pear," imported by Professor BUDD, does not prove hardier than Flemish Beauty with me, being killed to the snow line by our last very severe winter, while the Russian Pear, Bessemianka, alongside was unharmed. The fruit of Pasovka is described by Mr. GIBB as "long, narrow, yellow, often with a red side, very pretty, pretty good quality, and very good for cooking. It ripens in August." It may be valuable where the Flemish Beauty succeeds.

Bessemianka has made a magnificent growth the past season, every terminal bud growing strongly. Its close, upright, Lombardy Poplar style of growth is very characteristic. It is a rapid grower, all my trees three years from bud are over seven feet high, while some buds set last fall have made fine branched trees five feet high. HEINRICH GOEGGINGER, of Riga, Russia, says of this Pear—Montreal Horticultural Report 1885, page 117—"This fruit is, no doubt, of Russian origin. I have seen it cultivated a good deal in the Province of Moscow, and it is grown throughout Central Russia and the eastern part of the empire. It is of medium size, in color a fine glass green, at full maturity yellowish green, without any redness or russet. The flesh is yellowish white, very juicy, similar in taste to a fine melon." This is the only iron-clad that I find among the Russian and Polish Pears imported by BUDD and GIBB, though Sapieganka and Tonkavetka are nearly up to it. They are much hardier than Flemish Beauty, and possibly may do with us.

Fay's Currant.—Everything has some "out" in it, and this fine and productive Currant seems to be a very favorite subject for the attacks of the stem-borer. The Red Dutch, which I have grown quite extensively for years, is hardly attacked by it at all, but my Fay's, of which I have several hundred, have been riddled by it.

All the early Grapes have ripened fully here, this year. Moore's Early will, I think, be very successful. It is nearly as early as Tolman, and incomparably better. Delaware has made a fine crop also, and Brighton, Salem and Eumelan give excellent satisfaction. Speaking of Grapes, I was very much pleased with the Green Mountain, a seedling exhibited at the American Pomological, in Boston, by JAMES M. PAUL, of North Adams, Massachusetts. It is stated to be earlier than Tolman, and certainly is immeasurably better—as good as Brighton, I think.

Pearl of Savoy Potatoes have again, for the third season, proved with me the earliest, best and most productive of early market Potatoes.

The Buffalo Berry—This northwestern shrub, or small tree, Shepherdia argen-

tea, I have had a single specimen of, on my lawn for a dozen years; but as the species is dicœcious, and my specimen a male, I have only lately, by securing a "harem" for him, in the form of a circle, of the other sex, succeeded in obtaining a crop of the fruit. It has been represented to me as being equal to the Huckleberry, but it is, in fact, much inferior, a small, red, somewhat acid berry, which may be useful to the Indians, but certainly does not commend itself to a civilized taste. We have a native Shepherdia, S. Canadensis, which grows in Canada and Vermont, with yellowish and insipid fruit. The only recommendation I can give them is their odd, olive-like foliage, which attracts considerable notice. They are entirely iron-clad.

The Newport Winter Sweet.—The Tolman Sweet is a standard winter baking Apple over a wide extent of country, and it ranks among the very hardy varieties, but it is not iron-clad. The above named variety seems to possess all its merits, with the added power of resistance to extreme cold. I have never succeeded at all with the Tolman, but my trees of the Newport have endured our severest winters unharmed, producing good crops of an Apple equaling the Tolman in size and keeping, as good for baking, and better for eating uncooked. It is roundish conic in form, grass-green in color at gathering time, becoming yellow during the winter, with a fine white flesh, and a pure, delicate, sweet flavor, becoming tender as it yellows up, which Tolman does not.

Russian Sweet Currant.—I received seeds of this Currant from Mr. GIBB, of Canada, several years ago. The plants vary greatly, the foliage more resembling that of the Gooseberry, though there are no thorns. The fruit is small, in small, close clusters, and is of an insipid sweetish flavor and slimy texture, much resembling the wild Bunch-berry, Cornus Canadensis. It does not seem to be valuable, though seedlings may not do justice to the parent from which they are derived. The color is identical with that of our red Currants. Our native Sweet Currant, Ribes prostratum, is much larger and better.

Minnesota Honeysuckle. — This, received from Olmstead County, Minnesota, is, possibly, Lonicera flava. The flowers are pale yellow and rather insignificant, without odor. The plant is iron-clad in the severest exposures, and though it will climb, it grows on the lawn unsupported into a large, round-topped bush, which attracts much attention from visitors by its vigor, its peculiar, pale, glaucous foliage, and in the fall by its large, brilliant and very abundant red fruit. It grows thriftily in poor, dry soil, and its foliage endures a good deal of frost without injury. I did not particularly admire it at first, but its vigor, health and hardiness, and the interest shown in it by visitors, who are eager for seeds to take away, have made me think it quite an acquisition. It does not show any tendency to sucker, and has a sturdy, honest look that commends it to those who like plants which give no trouble.

T. H. HOSKINS, M. D., *Newport, Vt.*

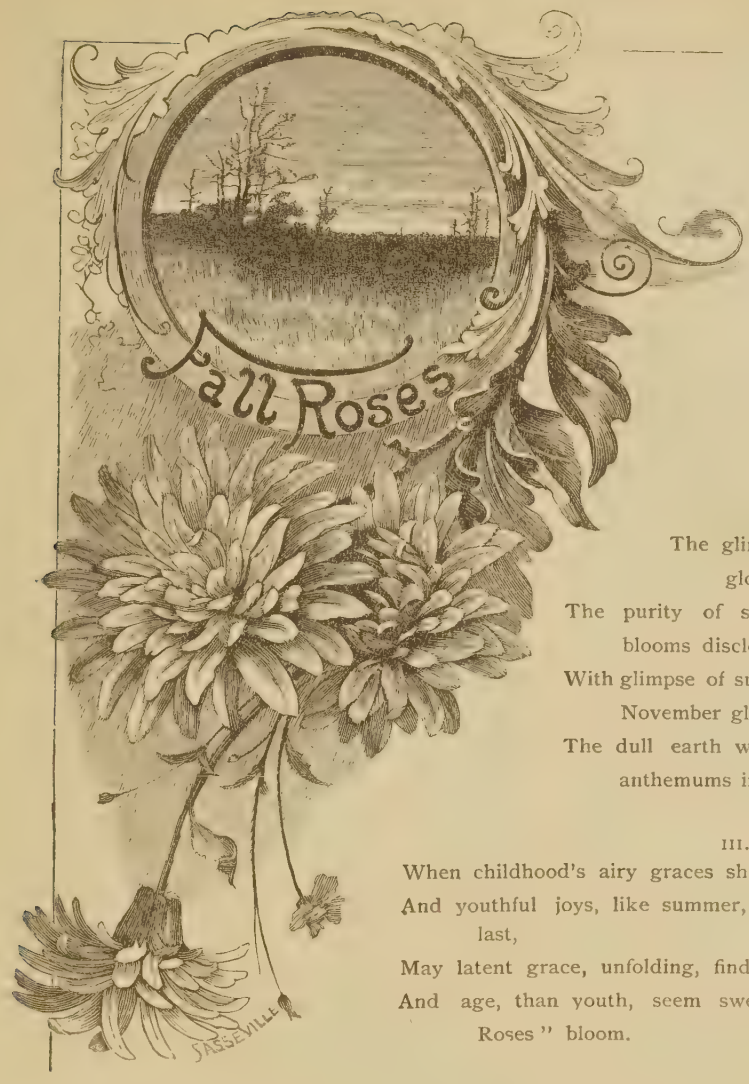
A GREAT SHOW OF GRAPES.

At the recent meeting of the American Pomological Society, at Boston, one interesting feature of the fruit exhibition was one hundred and sixty-five different varieties of Grapes, exhibited by T. S. HUBBARD, Fredonia, N. Y., being the largest collection of American Grapes ever exhibited. The largest previous exhibition was by the same firm, at St. Louis, in 1881, when one hundred and thirty-five varieties were shown. The Eaton Grape, which attracted much attention by its enormous clusters, has been purchased by this firm, who will introduce it. It is said to be similar to Concord in growth, foliage, health and quality, but much larger in bunch and berry.

MINA LOBATA.

Elsewhere will be found a communication in regard to the blooming of this climbing vine. On the 14th of October a lady called our attention to one she then had in bloom. There was but a single raceme of flowers, though the buds were plentiful. This was in Yates County, on the east shore of Canandaigua Lake. The seeds were sown in May, and she thinks by commencing earlier in the season more and earlier bloom can be had. It is a pleasure to record these observations, and, possibly, when the treatment of the plant is better known its blooming may be assured in proper time.

CHRYSANTHEMUMS.



I.

The Buttercups and Pansies will have all been laid to rest,
The Tulips and Carnations all be gathered to earth's breast,
The Roses and the Lilies will have lost their sweet perfume
Before, to cheer the lonely earth, Chrysanthemums will bloom.

II.

The glimmer of the sunshine, and the glory of the Rose!
The purity of snowflakes will their friendly blooms disclose.
With glimpse of summer smiling through the gray November gloom,
The dull earth will grow brighter with Chrysanthemums in bloom.

III.

When childhood's airy graces shall have fled unto the past,
And youthful joys, like summer, prove too sweet and fair to last,
May latent grace, unfolding, find in added years a room,
And age, than youth, seem sweeter when our life's "Fall Roses" bloom.

DART FAIRTHORNE.

REVIEW NOTES.

In reading the September number of the MAGAZINE, I confess, with H. M. L., that I was surprised at the remark that Hoya "must not be expected to bloom in winter," as since I have learned to treat, or, rather, not to treat, it, but to let it severely alone, mine has bloomed winter and summer, without intermission. But the secret lies not "in giving it plenty of sun," as H. M. L. suggests, for mine is in a north window, where scarcely a ray of sunlight ever reaches it, which proves that it will bloom in either "sunshine or shadow," but in keeping it somewhat root-bound and giving it warm water, but sparingly, and the occasional fresh air, which is essential to the vitality of all plants.

Was much interested in reading the article headed "An Honest Protest," and also amused where the writer touched on the inconsistency of women in regard to "making over," &c. We suggest that he pass the dress-making theory over to the originator of the article which he so forcibly attacks, as she is doubtless better fitted to manage that than to give advice on floriculture. But E. R. is certainly sound on the question of plant culture, and if we could have more of such plain, practical advice in place of the many high-flown theories that appear in some journals, and which we are unable to reduce to practice, it would be more useful and far more interesting to us who are amateurs.

M. P., *Mahopac Falls, N. Y.*

MICE IN ORCHARDS.

The following extracts from a paper by S. R. LELAND, read before the Maine State Pomological Society, at its annual session, will be interesting and valuable to orchardists everywhere:

I think pomologists agree that there are more fruit trees destroyed by mice and borers in Maine than by all other causes combined, and any methods that tend to prevent or even diminish the destruction of our orchards by these pests, from whatever source obtained, is perhaps worthy of a careful trial.

My orchard is situated on a ridge running north and south, and extends down to wet land to the west, and through the easterly part of it is a narrow swale that drains a muck swamp lying in the northeast corner of the orchard. These wet lands are just where mice delight to live. When I commenced setting trees the land was newly cleared, in grass, covered with decaying stumps, lots of stones, uneven, with knolls and hollows, and seemingly a more inviting home for mice could not exist. I commenced my orchard in the spring of 1869, by setting one hundred trees. In the spring of 1870 I set more, and in the last week in October of the same years I set eighty-five trees, of which I lost nearly all. In 1871 and 1872, I enlarged my orchard to three hundred and fifty trees. Up to this time I had done nothing to protect my trees from the mice, except an application of ashes once a year, as I will explain later on. The year 1872 was what is known in this section as the "sorrel year." My land, having been newly cleared, bore an immense crop of sorrel, with so little grass with it that I didn't esteem it worth storing for fodder, so I mowed it and raked it around my trees, which gave them a bountiful mulching.

After doing that I became frightened for fear the sorrel might contain too much acid for the good of the trees, so wrote to the venerable S. L. GOODALE, at that time Secretary of the Board of Agriculture, for his opinion. He answered that I need have no fear on account of the acid in the sorrel, but it would make a good harbor for mice next winter, and I had better rake it away in the fall. Either from want of faith in Mr. GOODALE's judgment or lack of time I failed to rake the sorrel away from my trees. The following winter there were more Apple trees killed by mice in this vicinity than any other winter since I commenced setting my orchard. A neighbor had thirty-five trees in the spring of 1872, the sorrel year, near my orchard, and in the fall to protect them from mice had hauled out well rotted manure and heaped it around the trunks of his trees from twelve to eighteen inches high. After there had been some thawing weather next spring, and a funnel-shaped hole had thawed around the trunk of the trees, he came into my store one day and said that the mice had girdled every one of his trees, and inquired about mine. I hastened to my orchard and went over it. The snow had thawed around the body of most of the trees so I could see them to the ground, or nearly so, and I found no work of mice.

After the snow was gone, I visited every tree and found, perhaps, half a dozen that had been barked a little, but not a single tree materially injured. But the sorrel! Imagine a nest of straw on which a number of pigs have lain a long time and you have a good idea of the condition of that sorrel—thoroughly cut and fined up and almost innumerable nests in it made by mice. I have every reason to believe, and do believe, that the sorrel seed saved a large proportion of my three hundred and fifty beautiful young trees from destruction.

After looking the situation over leisurely and thoroughly, I seated myself on a bowlder to reason, and came to the following conclusions:

First. That mice never eat the bark of an Apple tree from preference, but as a last resort to sustain life.

Second. If there is a grain or seed of any kind within their reach sufficient to sustain life, they will never molest an Apple tree.

Third. That I had got to winter more or less mice each winter, and I could do it cheaper on grain than on Apple trees. I have seen no reason yet for changing the conclusions arrived at while seated on that bowlder, and have acted accordingly.

Knowing mice prefer Oats to any other grain, I have supplied my mice each fall with the amount my judgment told me would be sufficient to winter them, and that is the principal protection I have

given my orchard. My method is to carry Oats into the orchard late in the fall, take a bailed basket full on one arm and drop handfuls in the hollows and along the edge of the wet land alluded to above, and where the snow drifts on. A little observation in spring has shown me where the most mice winter, and there I leave the most feed. I have used tarred sheathing paper around trees to a limited extent, but if mice are driven to the necessity of living on the bark, they will gnaw the tree above the paper. A little observation during the summer and fall will determine whether there are few mice or many, and I provide for them accordingly. When the mice are thick over winter I seldom see a pile of Oats in spring not eaten. When there are but few they are not eaten so clean.

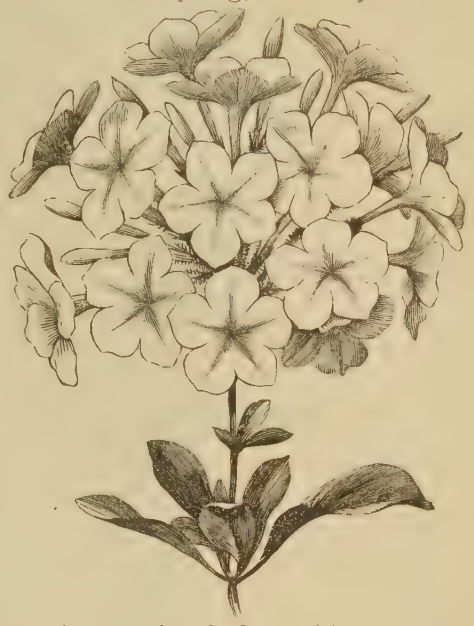
Now for the result of my method of protecting trees from mice. I have now about seven hundred trees. I commenced setting seventeen years ago, and have set some every spring since. I have probably lost in the time one hundred trees (losing eighty-five fall planted at one time), so I have set out eight hundred trees. In addition to this, I have sowed two nurseries in the time and within the limits of my orchard. The trees in the oldest one are all disposed of, and nearly all in the other. All the trees I have lost by mice in the orchard and nurseries in seventeen years can be numbered on the fingers and thumbs of my two hands. I think no one will doubt the efficiency of my method of protection, but the question of expense may be raised, and in anticipation of such an advent, I will answer in advance. It is not as expensive as paper or birch bark. The extra time required in putting on the bark or paper in the fall, and removing them in spring, will more than balance the cost of Oats above that of the bark or paper.

Thousands of trees girdled by mice are given up as spoiled, that could be saved by timely care.

Visit the orchard often in early spring, and if trees are found gnawed, immediately apply mortar made of clay and horse manure, and wind with woolen cloth. Trees with the bark removed to the wood, treated in this way, before they have been exposed to the wind and sun long enough to sear the wood, nine times in ten, will form a new bark and come out all right.

PLUMBAGO CAPENSIS.

This is a valuable plant for winter blooming, and is easily managed. Cuttings made in March will root easily and quickly under favorable circumstances, and later in spring, or early summer,



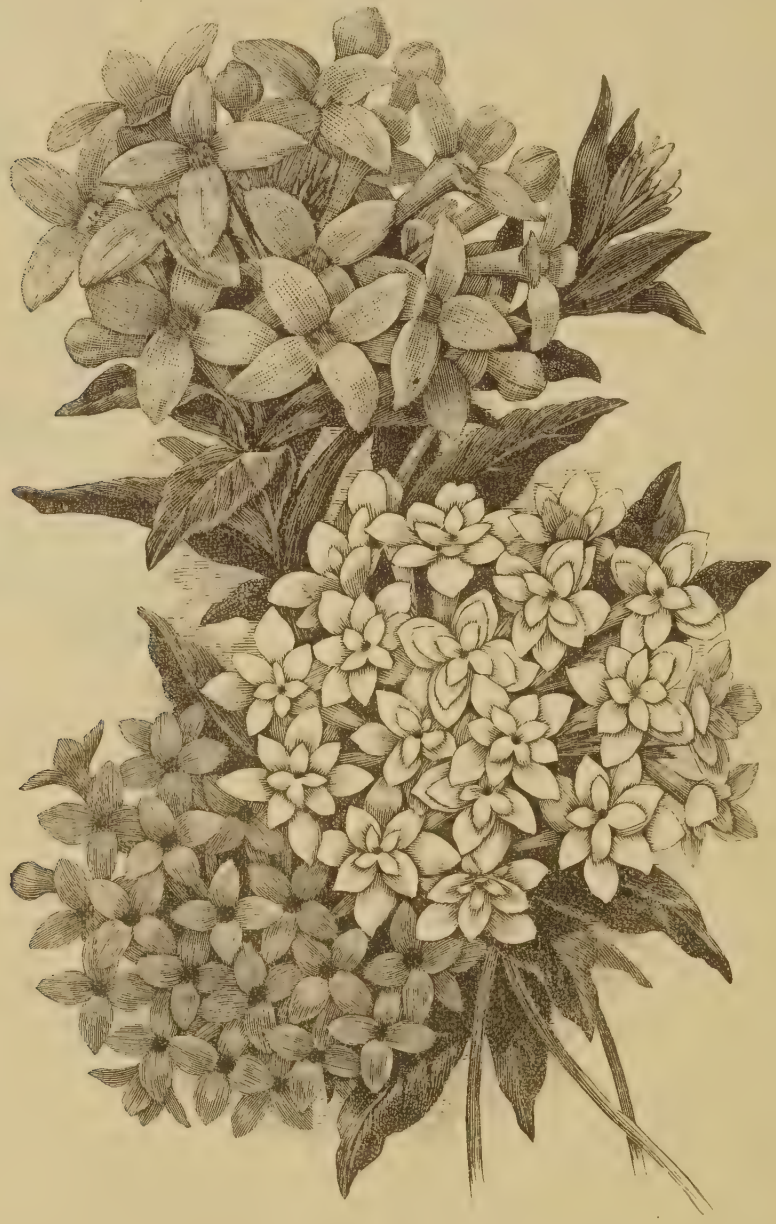
when the weather is favorable, the young plants can be planted out in the open ground, where they will make a rapid growth. About the end of September they can be lifted and potted, placing them in small pots, so as to restrict somewhat the roots. Placed in a cold-frame, and kept shaded when the sun is bright, they will become established in about ten days, and may then be transferred to the greenhouse or warm window in the house, where they will soon commence to bloom, and will give a large amount of flowers in late autumn and early winter.

FRESH GRAPE JUICE.

The following method is advised for keeping Grape juice fresh: Pick the Grapes from the stems and wash. Cook with as little water as for jelly, till soft. Strain through a flannel bag. To one quart of juice add three-quarters of a pound of granulated sugar. Let the juice boil and skim it, then put in the sugar and cook till dissolved. Put boiling hot in self-sealing jars or bottles corked and sealed. This makes an excellent and refreshing drink by using one-third of the juice to two-thirds water.

BOUVARDIAS, SINGLE AND DOUBLE.

These plants, if they have been properly handled, will now be in bloom, and perhaps a reserve coming on. The flowers are very charming in form, color and fragrance, and every collection of plants should embrace most of the varieties. It is a very common practice now to summer them in the open ground and pot them



B. ROSEA MULTIFLORA B. ALFRED NEUNER B. SANGUINEA.

early in autumn, place in a cold-frame for a time and afterwards remove them to a warm place in the greenhouse or enclosed window, where they can have a heat of about 65° during the day, dropping not lower than 50° at night. Thus treated they will continue to bloom for several months. If kept too cool they bloom less freely. The white, the pink and the crimson varieties are all desirable, and the double ones not less so for their lasting qualities when cut. In the engraving herewith the large single flower represents B. rosea multiflora, the small single B. sanguinea, and the double one B. Alfred Neuner.

Bouvardias are largely raised by florists for cutting; how successfully it is grown as a house plant we hope some of our readers may advise us.

GARDEN INQUIRIES.

I wish to ask you a few questions through your valuable MAGAZINE.

Do you know any way to get rid of the Squash bug, also, a long, gray bug that has literally eaten all the leaves off my Tomato vines? They do not seem to bother any thing else.

Will heavy domestic painted with white lead do to cover a small hot-house so as to keep out cold, instead of glass?

Have you an early Potato, as early as Vick's Early, better suited for market? Vick's Early is the best family Potato I ever saw, but there are too many small ones in the hill for a market Potato. It far excels any Potato in flavor I have ever eaten.

A. P. S., *Denton, Texas.*

In the last annual report on injurious and other insects of the State of New York, Dr. LINTNER publishes the following method of preventing the attack of the Squash bug, Anasa tristis: To two quarts of gypsum put one tablespoonful of kerosene oil; this sprinkled on the vines will generally answer for the season. If the bugs return, repeat the operation. The person giving the above states, "I applied it this season on several thousand hills of Melons, Cucumbers, &c., after the bugs had commenced operations, and have not since had a vine destroyed. I have used it for several seasons with the same result." This is safer and cheaper than Paris green. This preventive promises to be effective against the striped Cucumber beetle, Diabrotica vittata, and the Cucumber flea-beetle, Crepidodera cucumeris, which, in addition to the Squash, injure seriously the Melon and the Cucumber.

A cloth for covering hot-beds, cold-frames, &c., called patent plant-bed cloth, is now made expressly for the purpose by a firm in New York. It is advertised as a substitute for glass at one-tenth the cost; protects from frost, &c.

For an early market Potato there is none, all things considered, better than Early Ohio.

POTTING CHRYSANTHEMUMS.

About this season of the year some one takes occasion to note in the horticultural journals, quite as a matter of course, that "Chrysanthemums can now be potted up," usually adding that "they do not suffer in the least." For the guidance of some less expert cultivators, it is to be hoped that some one who succeeds in this little trick will condescend to a few particulars, as, for instance, the size of plants and the size of pots into which plunged. There is no difficulty in raising good "Mums" either in the open or in pots, for any one with ordinary gardening experience; but potting up well grown plants in the fall "beats me," and I have never had the pleasure of seeing a plant so treated by cultivators in vicinity of New York, which was of very much account. The flowers, though plentiful, have always been very thin, and when exhibited, as they often are, scarcely lasting through a few days' show. My experience with a few hundred plants, which I raise for amusement yearly, is that they are furnished with a mass of roots proportioned to size of bush, and a bush of from three to five feet spread cannot be taken up safely without a clump of earth at least two feet in diameter, requiring a rather absurd sized pot—as same could be grown on in a ten or twelve-inch pot at largest. By keeping well saturated with water and away from currents of air, I have flowered "Mums" lifted when of large size, but the result has never been satisfactory in a single instance. If any one has had a different experience it is to be hoped he will give particulars as above, and send you a few flowers as a sample of quality.

G.

GRAPE-GROWING FOR MARKET.

A letter, dated October 19th, received from BLACKWELL BROTHERS, dealers in foreign and domestic fruits, and general commission merchants, in New York, says: "Ten pound baskets of Catawbas are very weak here, this day, at four cents. This country is producing too many Grapes."

A year and a half ago we raised a similar note of warning in the following words:

"In looking over the whole field it is evident that fruit-growing for market, as a pursuit, is now as greatly extended as it will bear, and that many engaged in it are at most only making a living and holding on, hoping for something better in the near future. Fruit-growing has been pushed to the fore in this country, until now it may be necessary to save it from its friends."

After the above was written, the Grape season came on and the crop sold at a lower price than the market had ever before reached. This year it has dropped

still lower. The bottom will soon be reached, for we are not far from it, and thousands of acres of vines already planted will shortly be in bearing, and preparations have already been made for a large area of planting in the spring. What is to be done with the fruit? It is plainly to be seen that some engaged in the business must go to the wall. Only the most energetic, skillful and business-like can stand against the pressure. Grape-growers are now only repeating what has already been enacted by fruit-growers several times in this country. The planting of Apple orchards was pushed to the extreme, and until there was no money in the business when a full crop was produced. The same has been true of Pear-growing. Peach-raising has had its ups and downs several times, and the cultivation of the small fruits is in a constantly fluctuating condition.

Let those who are considering vine planting for market purposes consider these facts.

The statement above in regard to the New York market applies equally well to all the great markets in the country. From the price named freights and commission must be deducted. The Catawba is one of the best varieties, and the one with the most restricted area of cultivation, and naturally might be expected to sell at a paying price. Isabella and Concord have been as low as three and three and a half cents. Can there be a doubt that the supply is greater than the demand?

DWARF CHRYSANTHEMUMS.

An article in your October number from the London *Garden*, recommends the layering of old plants of Chrysanthemums to form dwarf ones, which are often very desirable. It is scarcely worth while to waste so much room in the garden as is required by this plan, and besides, many shoots must be broken off in bending down, as "Mums" snap off so readily at the joints. A much better plan is to bind a good handful of damp sphagnum loosely around the stem at the right height. An occasional watering will keep the moss moist, and it will soon become filled with roots, when the stem may be cut off and potted, keeping close, of course, for a few days until the roots commence to run in the soil. G.

GUAYMAS, MEXICO.

Guaymas is a small city of about five thousand inhabitants; its houses are chiefly one story "adobé" buildings, built around a court, or "*pátis*," as it is called. In the middle of the *pátis* is usually a very small garden, a fountain, or some Palm trees. The city is situated on a very pretty bay of the same name, an arm of the Gulf of California, and this bay is surrounded by picturesque mountains, clearly of volcanic formation. No trees cover their rough sides, and, indeed, no trees are to be found for miles, excepting the carefully planted and cultivated ones on the ranches a few miles from the city; but grand Cacti rise up in every direction, like the bristles on the backs of hedgehogs, and the beautiful Night-blooming Cereus is as common as weeds in other countries. Here it is called "Reina de Noche," Queen of Night, and is the only one of all the gorgeous Cacti that the Mexicans deem worthy of a place in the garden. Water is very scarce and costly. It is brought into the city in skins slung over the backs of donkeys, or "*burros*," and sold from house to house at five buckets for a "*média*," six and three-fourth cents. The rainfall is very small, and takes place any time between August 1st and September 30th. Uusally there are only three or four heavy showers. The country during this season is covered with beautiful little wiid flowers, chief among which are the Lantanas, and a vine giving beautiful sprays of pink flowers, and called San Miguel. The time to plant flowers, vegetables, &c., is October, and all the flowers and vegetables come in for use in April, May and June; after that the sun beats down so fiercely that nothing will grow, and the farmers are busy enough in giving water to the thirsty trees and plants that live from year to year. All the farming is done by irrigation, and the wells are many yards, not feet, deep. Nearly every farmer, or ranch, has a steam pump, and the water flows through great ditches to the fields and orchards of Orange, Lemon and Date Palm trees.

The ground in the city is so impregnated with salt that it is difficult to cultivate flowers or anything else on it, and the Mexicans ars obliged to resort to the costly methods of either building a wall three feet high and filling with good

earth brought from a distance, or of digging out the same space for the filling process, so as to make a huge flower pot. During the winter fierce, hot winds blow very often from the deserts of the interior, chiefly at night, but sometimes in the daytime, too, and the poor flowers are left scorched and blistered, their their leaves black and curled up. Only plants that can stand a large amount of heat can be raised at all. The thermometer never goes below 40° even in the coldest weather, and save the hot winds, which are certainly very disagreeable, the climate from November to May is one of the most delightful ones on earth. No fires are ever required to warm the rooms, and consequently no chimneys are built except in the kitchens.

The people are very sociable and educated, especially in music, of which they are very fond. A military band discourses most delightful music on the "Plaza" three times a week, and the people sit or walk among the Orange trees and flowers with which the Plaza is adorned, enjoying at the same time the lovely music and the sweet evening air.

C. H. DEG., *Guaymas, Mexico.*

VALUE OF BEARING ORCHARDS.

A few years ago what may be almost called a popular craze prevailed in some localities on the subject of orchards. They were very profitable. The yearly product of an acre of bearing trees was generally more than the value of the bare land on which they stood. Naturally exaggerated ideas prevailed as to the value of such orchards, and small places fitted with fruit were often sold at several hundred, or even a thousand dollars per acre. Both owners and intending buyers sat down to figure up the amount on which a specified yearly product would pay legal interest. Of course, it loomed up pretty large. When any one goes to work figuring in this way he can easily make the most extravagant prices seem wonderfully cheap.

These anticipated profits are very deceptive. There is not nearly so much figuring on them now as there used to be. The buyers are not merely sickened by experience, but soured and disappointed as well. Some years the Apple crop has been an entire failure. In others trees have borne well, but the market has been glutted and the price has left the smallest possible margin for harvesting and marketing. Under these circumstances thousands of acres of Apple orchards in full bearing, or old enough to bear, have been dug up and the land devoted to other crops, and that, too, in places where ten to fifteen years ago such trees gave the land an increased value of several hundred dollars per acre.

This is the other extreme. The truth, doubtless, as usual, lies somewhere between the two. The radical mistake in both the old-time estimate of the profitableness of fruit-growing, and the present disgust with the whole business, is in supposing that fruit-growing can or ought to pay large profits without corresponding care, labor and skill on the part of the owner and grower. If it did or could do this, nothing would be more to the disadvantage of the business. If fruit cost nothing it could no more be sold than water or air. It is because it necessarily costs something that it can be made profitable to those who have the skill to make it cost them less to produce it than it does to others. For a while it seemed as if trees would grow fruit under any sort of neglect. Plant a tree and after a certain number of years it could be depended on to produce abundant crops, no matter under what treatment. Now it seems rather that only the greatest skill in management can make orchards even moderately productive. But if skill, care and labor can do this, as we believe it can, the present condition of fruit growing is really more hopeful than it was when little or no care was required. It is with fruit as with food. The worst famines in the world's history have occurred in places where nature is most bountiful and man needed to do little or nothing. Natural products are always more unreliable than those of the skillful cultivator.

It is, therefore, a gain to the fruit grower, if he would but understand it, that his specialty has ceased to be easily grown, and has become one requiring more than usual skill and labor. It insures him a better market and higher pay for all the labor and care he can give. Orchards capable of bearing and of the right varieties are now worth really more than they were when fruit-growing was booming. Good pomologists have

learned how to conquer the codlin moth and the other enemies which diminish the fruit crop. The business ceases to have the speculative character that it had when no skill and comparatively little labor were required. It takes its place as one in which skill and labor properly applied can never fail to receive their due reward. *American Cultivator.*

VICK'S MAGAZINE.

Our next issue will close the present and tenth volume of the MAGAZINE. During this time we have had in its publication the special and primary aim of interesting, helping and instructing those who, as amateurs, are engaged in gardening or plant-growing of any kind. That we have succeeded in this design the testimonies of our readers, continually received, sufficiently witness, and by this assurance we are encouraged to go forward in the same line of work, knowing that those who desire the assistance afforded in our pages are more numerous now than ever before. The improvement of the home surroundings, of school grounds, public grounds and streets, have, also, been directly encouraged, and will continue to be fostered as part of our recognized work. In regard to horticultural work, attention has been given to all branches and will be so continued; vegetables, fruits, flowers, ornamental plants and trees, and the native flora, will be the subjects of discourse and illustration. Our colored plates and engravings are made with great care, and are intended to represent truthfully the subjects shown; they are not exaggerated for effect, as most representations are which are intended for commercial purposes.

With confidence that the work we are doing is good, interesting and ennobling, we now ask the assistance of all our readers for the coming year. We wish to be a constant monthly visitor to at least ten homes where now we are at one. May we not rely on the assistance of our friends at this time for a wide extension of influence? If nothing more, will you take the occasion, when offered, to say a word in our favor to your neighbor. At this season people everywhere are thinking about and deciding upon the magazines and papers which they intend to take the coming year.

We want agents everywhere to take subscriptions for us, and no one is better qualified for this purpose than one who is a regular reader of the MAGAZINE. Who will so act? We must have one agent at every post office. We do not offer premiums of this, that and the other for such service, but every one who will assist in getting subscribers will be liberally paid in cash, according to the amount of service. Send a letter or a postal card, and full information in regard to terms of agents will be returned, together with specimen copies, if desired. Now is the time to begin, delay will be loss. Please let us hear from you at once.

BINDING THE MAGAZINE.

We will bind the MAGAZINE in nice cloth covers, for any subscriber, for 50 cents, and return the book, with the postage or expressage prepaid by us. If subscribers will send us the eleven numbers in season, we will add the December number and have the volume bound and returned if possible before the Christmas holidays. Please give your name on the package when sent, so that we may know to whom it belongs.

SEND IN NAMES EARLY.

It will be a great convenience if our subscribers will renew their subscriptions and send in their clubs early. It will aid us very much in arranging our books, save a liability to mistakes and enable us to send the January number so that you will have it to read Christmas Day, or at least look at the pictures, if you are too happy to read.

LOST NUMBERS.

One number more completes the volume for 1887. If any number has failed to reach any subscriber during the year, and the volume is thus incomplete, please send us a postal card, stating what number you need, and it shall be forwarded.

CLOTH COVERS FOR MAGAZINE.

We will furnish elegant cloth covers for the MAGAZINE, to our subscribers, for 25 cents each, and prepay postage. Any bookbinder can put on these covers at a trifling expense.

SILVER-ROD.

Who knows not the Silver-rod, the lovely and reverend old age of Golden-rod — else Golden-rod beautiful and sainted, looking moon-lit and misty even in the sunshine. In this soft, canescent after-bloom, beginning at the apex of the flower-cluster and gradually spreading downward, the eye finds an agreeable relief from the recent dazzle of yellow splendor. I almost forget that the herb is not literally in bloom, that it is no longer ministered to by sunshine and dew. Is there not, perhaps, some kind of bee that loves to work among these plumy blossoms, gathering a concentrated form of nectar, pulverulent flower of honey? I gently stir this tufted staff, and away floats a little cloud of pappus, in which I recognize the Golden and Silver-rod of another year, if the seeds shall find hospitable lodgment in the earth. Two other plants in the wild herbarium deserve to be ranked with my subject, for the grace and dignity with which they wear their seedy fortunes; Iron-weed, with its pretty, daisy-shaped involucres; and Life-everlasting, which, having provided its own cerements and spices, now rests embalmed in all the pastures; it is still pleasantly odorous, and, as often as I meet it, puts me in mind of an old-fashioned verse which speaks of the "actions of the just," and their lasting bloom and sweetness. On a chill November day, I fancy that the air is a little softer in places where Silver-rod holds sway, and that these spirits of peace and patience have their special haunts; also, passing my thoughts under that rod for discipline, I record a gain in content and serenity.

EDITH M. THOMAS, in *The Round Year.*

THE CRANDALL CURRANT.

A new variety of Currant, called the "Crandall," has been introduced to the trade by FRANK FORD AND SONS, of Ravenna, Ohio. This variety was raised in the garden of R. W. CRANDALL, of Newton, Kansas, some ten years since. Its history is as follows: Mr. C. had growing in his garden some plants of the wild Currant, Ribes aureum, and near them were other plants of the Cherry Currant. Seeds from the fruit of these wild Currants were planted, and among the plants coming from them was this one, now called the Crandall. The introducers describe it as "bluish black in color when fully ripe, and varies in size from one-quarter to three-quarters of an inch in diameter. To say they run in size from a large red Currant to a good sized Cherry, may give a better idea; and growing in bunches of five to eight berries each, at nearly every bud or joint of the previous year's growth, and on spurs of the older wood, they are enormously productive." The flavor of the fruit is said to be peculiar to itself, and superior to that of the English Black Currant. Professor BUDD, of the Iowa Agricultural College, says: "The fruit sent us by Mr. CRANDALL was better in quality and larger in size than the European Black Currants. We believe it to be valuable for general cultivation."

It is supposed that the Crandall is a hybrid between the Cherry Currant and Ribes aureum, as its seeds are more like the Cherry Currant, and the fruit has considerable of its flavor. The Currant worm does not infest this variety, and it adapts itself to almost every soil. Those who have tried the fruit consider it excellent for pies, preserves and jellies.

OUR YOUNG PEOPLE.

A FAIRY'S VISIT TO MORTALS.

"I wonder," said a wise old fairy, to her sisters, one evening, "what all this Thanksgiving fuss is about that seems to be going on amongst those queer mortals about this time of each year. I was dodging around, to-day, among their tall boys and young misses, to learn how many of them have any object in life—any idea of why they're even alive, taking up so much room in the world, (for they certainly can't be living simply for their own pleasure, like the flies on the window panes,) but I shall have to go again, for I found their heads full of Thanksgiving Day, which it seems will be to-morrow, and I want to learn what their heads are full of on other days. But, first of all, I'd like to know something about their Thanksgiving. Therefore, I propose that you, Sister Verity, spend to-morrow amongst them, learning all you can, and give the rest of us an evening's entertainment by reporting exactly what you saw and heard of those restless, visionary creatures."

In the Fairy's Grotto, next evening, all were eager and expectant, as Sister Verity commenced her narration.

"Very soon after leaving here," said she, "I reached the outskirts of the town, and, not knowing where to begin, I entered the first tidy-looking house in my way. At first I thought some one of the family had just died, so sober and sad did they all look. The father sat with bowed head, the children were doing up the breakfast work, and the mother was frying great quantities of luscious-looking dough-nuts, which were placed, as fast as done, in paper lined market-baskets.

"'O, yes, my child,' she was saying, 'we have many things to be thankful for, if we *can't* have a big Thanksgiving dinner. Think of the poor, patient boy across the way, and be thankful you each have your two eyes yet. Think of that terrible accident in the 'works,' and be thankful your father has his two hands still, which he will be glad to use when this dreadful 'strike' is over. Think of the motherless children next door, and be thankful you have me, as I am thankful I have you, my little helps and darlings. For my part, I am very thankful that I thought of selling doughnuts to help us out in such a time as this; and thankful for the strength that enables me to do it. Several ladies have already engaged the cakes for each week, and almost every family in the best parts of town will want them for to-day. O, I am very thankful for all and everything.'

"I felt the tears coming," said Sister Verity, "for I saw they were very poor, and so I hastened away and passed into a small dwelling, where the woman's breakfast was waiting while she was trying to get her husband out of bed by reminding him of the day. But he growled out, 'It bein' a holiday, I've no need to bestir myself with this bad headache I've got. Besides, what have I, I'd like to know, that I should be givin' thanks for it? Leave me alone.' And he turned over for another snooze. Then his wife said, 'You've great need to give thanks that you're alive this morning, with time yet to repent of last night's carousin' and spending of money that was to buy a bit of something nice for the children's dinner, and them a-crying, this moment, with the disappointment.'

"'Bother the brats,' he said, 'they can't be always stuffing with good things that'll only make 'em sick. Go 'way, I tell you, and shut your mouth.'

"The poor woman left him, with her apron to her eyes, saying, 'Only for the saloons we might have a happy home.' I didn't want my heart broken by these sobbing children, so I got out of hearing, hoping to find a place where I should not have to grieve for either children or their elders. Passing along many streets I finally entered a stately mansion, and saw, at first, only a young girl gazing listlessly through a window. There were mosaic floors, Persian rugs, frescoed ceilings, inlaid cabinets and tables, and

costly furnishings through all the rooms, and I thought, 'How happy must be the dwellers here,' when, at that moment, a tall youth impatiently pushed aside a portiere and entered, angrily exclaiming:

"'I'll not return to college at all if I can't have $200 more spending money for the rest of the term. I've got to have it or stay at home.'

"'O, you begin to feel it, do you?' his sister said. 'How do you think I've got along the last four months?—ever since those crazy fellows got up this horrid strike. Papa began to cut me down from the first—haven't been any where nor done anything since—but mope. It's some satisfaction, though, to think how those creatures are punishing themselves. Just think—the Company always gave each man of them a turkey for his Thanksgiving dinner, and now they're nearly starving for want of common food.'

"'Are they, truly?' earnestly questioned the youth.

"'So it is said,' she answered.

"Then down he dropped in a seat and fell to thinking. Presently, looking up, he said, 'See here, that turkey donation business has just struck me with an idea. I believe, after all, those workmen have a strong showing on their side. If I were putting in all my time at regular labor, I'd expect to get wages enough to buy my own turkey without having to pinch elsewhere, either, and I shouldn't enjoy that class of favors from my employers.'

"'That's just what mamma says,' the sister answered, 'and don't you think, she's going to make me drive around with her to-morrow to call on every striker's family, and then she's going to see each member of the firm. Why, would you believe, she actually wanted to get up a mammoth lunch, to-day, for the whole lot of them, but papa said it would not be best, that the other members of the firm would misinterpret the motive unless they had joined in themselves. But I can imagine what a dismal Thanksgiving dinner we'll have to-day—no invited company, except all our old servants and their babies, and not anything that you and I care for.'

"But here I had to leave them," said Sister Verity, "for there were so many places yet to visit. In the next house where I took items was a sprightly elderly couple, surrounded by their children and grand-children, who were to sit around the old family table, all together, once more. They made a beautiful picture, and I felt sure that those mortals must be happiest in old age who have properly reared a large family of children.

"Leaving there, I soon discovered two large boys just starting from their home with heavy baskets. I followed them from one street to another, and finally up the dirty stairway of a tenement house and into a room where lay a young girl, suffering and helpless from spinal disease, with no relative in the world but her mother, who herself was pale and worn with labor and anxiety. The boys set down their burdens, hastily cleared a table of work-basket and sewing, placed it against the bed-side and began to empty the baskets. First came out a steaming coffee-pot, cream and sugar; then a roast chicken, oysters and salmon, with various vegetables, salad, pickles and jelly; next was butter, rolls, mince-pie and doughnuts. (These last were surely some of the same I had seen earlier in the day.) Last of all was canned fruit, Grapes, Oranges, Figs, Bananas, nuts, and a package of tea. The poor girl kept saying, 'Oh, oh, how nice,' but the poor mother just dropped into a chair and said nothing. As the boys were slipping out, the sick girl said, 'Mother can thank you better some other day, and I thank you now.'

"Hastening on again, I found in several successive dwellings the family relatives all assembled—some of them from far away homes—to meet once more in a family group within the old homestead, while still the aged parents are alive to receive them. 'Surely,' thought I, 'this is a beautiful custom, tender and touching.'

Once I happened into a house where I heard the happy voices of many children above stairs, and thither I betook myself. There I found a pale-faced boy on a reclining chair, who had long suffered from hip disease and would always be a cripple. His young friends had been invited to take Thanksgiving dinner with him, and a circle of little tables curved around him, like a vast horse-shoe, while shining eyes and agile tongues made bright and merry the holiday for the young invalid.

"Next, I followed a physician into a

house where lay a young man who knew he was not long for this world, but he looked serene and happy. I heard him say to the doctor, 'Look at the heaps of things sent into me by kind friends, that I cannot use. I've been wishing for you to come that you might give me some names among your poor patients who are not so well provided for, that I may share with them.' This, the doctor seemed glad to do, after which I went with him to another house where the patient was nearly well, but despondent, because of his business having been burned out during his long illness, and he was troubled about his family. When the doctor left, I saw him give the wife a receipted bill of all charges, saying, 'I'm more than glad to do this—say not a word, please.'

"And now, as I slipped into different rooms, I began to find the inmates at their dinners. The tables were mostly loaded with what they call the fat of the land. From house to house I went and saw great numbers of happy faces—all were joyous, some were merry, and the children everywhere were jubilant. The groups around plainly appointed tables seemed more completely abandoned to the happiness of the day than those assembled around gleaming cut-glass and silver. I wondered why.

"At many places, where I found them just seated at the table, I noticed that all remained silent, with bowed heads, while the host asked a blessing or gave thanks. Sometimes there was a clergyman, or other invited guest, present, who was invited to that privilege——."

Here the wise old fairy interrupted with, "I wonder if we ought to do that over our feasts. What did they say?"

"O, the phrasing was different at different places. But several of the thanksgivings were something like this:

"'Thou Gracious Bestower of all good gifts, we thank Thee for all Thy mercies, especially for the return of seed-time and harvest, and for the crowning of the year with the increase of the ground and the gathering in of the fruits thereof. May our land continue to yield her increase to Thy glory and our comfort, through Jesus Christ our Lord. *Amen.*'"

"That's very good; I wish I had been with you," said the old fairy. "But our own feast is awaiting us now, in the next grotto, and the chandelier of stalactites is already ablaze above the table. We'll hear the rest of your report about those curious mortals another time."

MARIA BARRETT BUTLER.

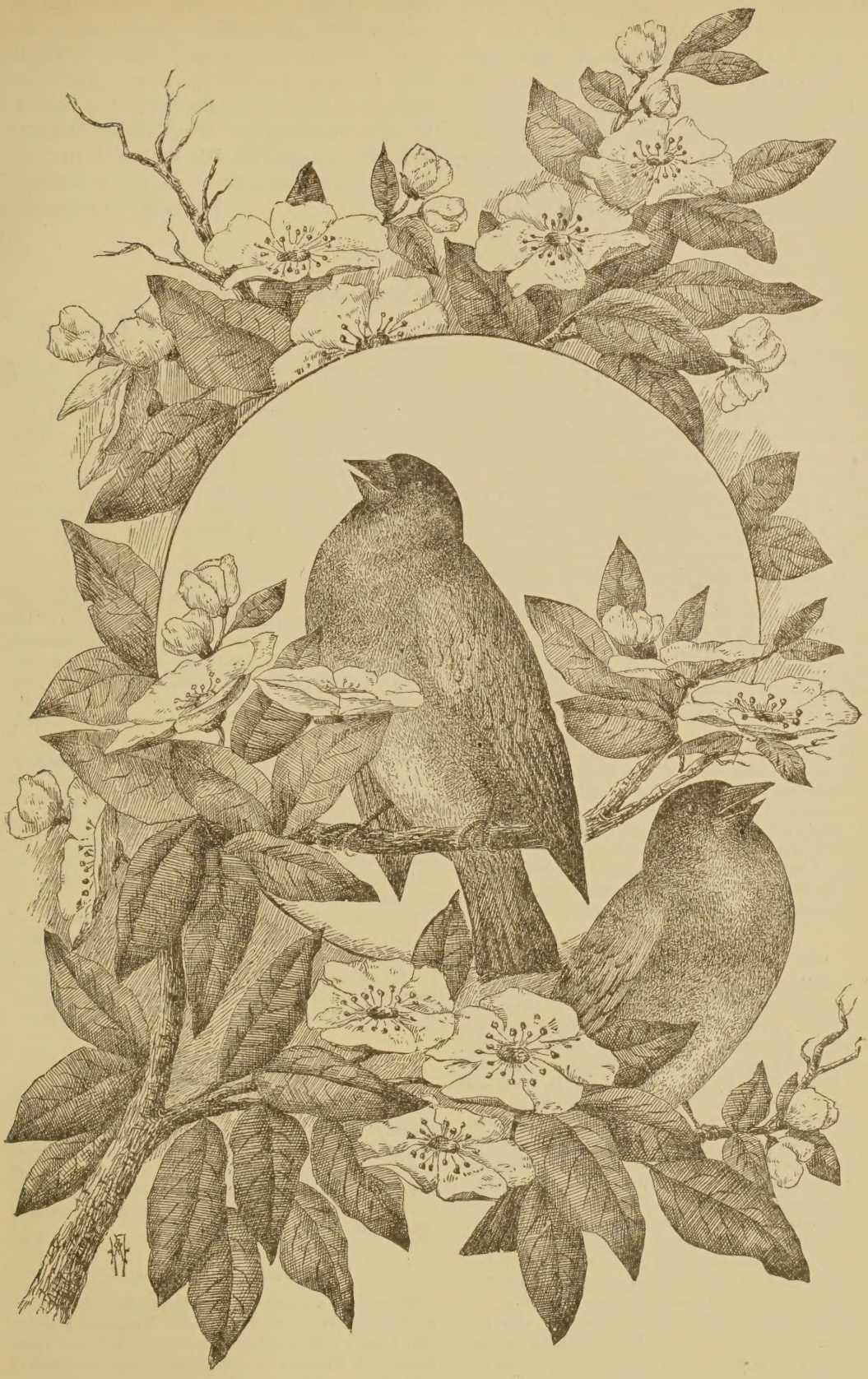
ROBINS.

Who does not know the robins, bright, merry little birds, always busy, hopping or flying here and there in search of food for themselves or the little birds in the home nest, safely hidden away in the bough of a tree. The parent birds are always anxious and watchful for the safety of their families, and if an enemy is seen near the nest, the older birds show the greatest anxiety and distress, and fly back and forth in a most excited manner, uttering at the same time a little cry of fear, and if one of the young birds, by accident, falls from the nest, which is sometimes the case, the distress of the mother knows no bounds.

Robins are very sociable birds, and will often build their nests in the lower branches of trees or bushes near a house, where they live fearlessly, seeming to know that they are favorites, and that no one will harm them. The nests are made of twigs for the outside and lined with hair, and in this soft, cozy little home from five to seven small eggs are laid. These are watched carefully until one day the little ones may be seen in the nest Queer looking little things they are, too, for they seem all necks and mouths, and one would think it impossible for them ever to become like the pretty, sprightly redbreasts. They are cared for by the parent birds and fed with worms, small beetles and other insects until they are large enough to take care of themselves.

Though the robin cannot be considered a song-bird, yet his note is full and clear, and in the spring, especially, it is heard with pleasure. The birds are sometimes taken when young, placed in a cage and kept as pets.

A full grown bird is about five inches long, the body plump, and legs exceedingly slender for the size of the body. The head is black, the body of a brown shade, the upper part of the breast red and the under parts white. The wings



THE AMERICAN ROBIN.

are broad, and the tail very slightly forked. They are found in many parts of the world, and in some places are such favorites that laws are made to prevent their being killed at any time. They belong to a species of bird called Sylvidæ, which includes the thrush, a bird celebrated for its peculiarly sweet, musical song, a clear, mellow whistle of several notes. There is the blue-bird, which is also called the robin. These are generally birds of passage, although they will often remain in sheltered places quite far north, but when they do leave the colder for a warmer clime, they always return in early spring, and the bright little visitors are greeted with a hearty welcome.

M. E. WHITTEMORE.

EDITOR'S MISCELLANY.

REPORTS RECEIVED.

Without being able, at this time, to give extended notices, we would acknowledge the receipt of the Report of the Department of Agriculture for the year 1886. It is a volume of over 700 pages, with numerous illustrations, plain and colored plates, and contains a great variety of most valuable information for the farmer, the fruit-grower, stock raiser, &c.

We have also received separate copies of the Report of the Division of Forestry, by B. E. Fernow, Chief of the Division, and the Report of the Botanist, Dr. George Vasey, both of which are excellent, and to which we shall hereafter have occasion to refer.

The Preliminary Report has been received of the Annual Meeting of the American Forestry Congress, held at Springfield, Illinois, in September last.

The Forest Commission of this State have sent us, with their compliments, the Second Annual Report of the Forest Commission of the State of New York for the year 1886.

The Second Annual Report of the Injurious and other Insects of the State of New York, by J. A. Lintner, State Entomologist, has been received, and it is a welcome addition to our literature on this subject. Our National and State governments are doing splendid work for farmers and gardeners by the efforts of the scientific men engaged specially to aid them in their work, and thus, indirectly, increase the agricultural products of the country.

LEE & SHEPARD'S NEW PUBLICATIONS.

The holiday publications of Lee & Shepard, of Boston, have established for themselves a reputation among the handsomest issued. Among the fine things just coming from them, are Sir Walter Scott's poem "The Bridal of Triermain," with fourteen full page illustrations by Percy Macquoid, R. I. It will be an oblong quarto, bound in gold cloth. Mr. Percy Macquoid, R. I., was specially selected by the committee of the London Art Union to prepare their annual presentation book for the year, his success in the Royal Academy and in other places having made him a shining light in the Temple of Art. These illustrations by photogravure process have, in powerful handling and general effect, a strong resemblance to the broad sketches of the Spanish painters, Fortuney and Madrazzo, representing the best effects of the modern school of black and white.

In a new style, called the "Alhambra," this firm are just issuing a series of illustrated hymns and poems. The poems are so exquisitely illustrated that their beauty shines out with far greater clearness and power than their mere text could bring forth; and the deep character of these really great poems and the spiritual fragrance commingled with their poetic charm, cause them to be desired as among the happiest of gift books.

A year ago, Lee & Shepard conceived the idea of bringing out in tasty style a series of liliputian beauties,— Golden Miniatures,— comprising six of the choicest poems and hymns in the language. Palatine Boards daintily ribboned, and in French morocco with gilt edges. Taken separately or collectively, these immortal poems find ready responses in every human heart; and the illustrations reinforce the sublime import of the words.

THE CENTURY MAGAZINE.

After the "War Series" and the Life of Lincoln, the most important enterprise ever undertaken by *The Century* is the forthcoming series of illustrated papers upon Siberia, and the Exile System, by George Kennan, author of *Tent Life in Siberia*, who has recently returned from an arduous journey of fifteen thousand miles through European and Asiatic Russia.

The Century Magazine sent with Mr. Kennan to Siberia Mr. George A. Frost, of Boston, artist and photographer; and the forthcoming series of papers will be copiously illustrated from original sketches and photographs of exile barges, etapes, prisons and mines; Siberian villages and landscapes; types of little-known native tribes, and such other objects of interest as admit of pictorial treatment.

The series will begin in November with the first of several articles upon the Russian revolutionary movement, entitled respectively: "Prison Life of the Russian Revolutionists": "The Last Appeal of the Russian Liberals": The Assassination of Alexander II.": and "The Fate of the Russian Constitution."

HARPER'S MAGAZINE FOR NOVEMBER.

The attractions of Southern California life are cleverly displayed by Edwards Roberts, in "A Santa Barbara Holiday," beautifully illustrated. An important paper on "The Winter Climatic Resorts of Three Continents," is written by a special student of that subject, Mr. William Smith Brown. This number also contains many other articles beautifully illustrated, stories, poetry, &c.

SCRIBNER'S MAGAZINE.

Short stories appear in the November *Scribner's*, by Rebecca Harding Davis and Margaret Crosby. The former writes of life on a Louisiana bayou plantation, A number of remarkably fine portraits of well known amateur athletes in motion, illustrate Dr. Sargent's article on "The Physical characteristics of Athletes." The whole number is an excellent one.